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ORIGINAL ARTICLES.

AN IMPROVED METHOD OF TREATING HIGH-SEATED CANCERS OF THE RECTUM.

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MANY will agree with me, I fancy, in considering the Kraske operation a very unsatisfactory one for the removal of high-seated cancers of the rectum. In addition to the depth of the wound, the more or less jagged invasion of the peritoneal cavity, the possible difficulty of satisfactorily drawing down the upper portion of the bowel, and, finally, the trouble that is involved in the proper suturing of the preserved portion of the rectum to the proximal end, all render it, with its annoying hemorrhage, an operation that is often in my judgment and experience troublesome and devoid of surgical neatness and precision. It is true that within four to five inches from the anus the affected part of the bowel within the area can be easily reached and removed and a fairly satisfactory sacral artificial anus created if the anus is involved. But if the anus and, say, two inches of that end of the rectum can be saved, a point which is of great importance to the subsequent comfort of the patient, which means a tumor at least three inches from the surface and to do which the bowel above must be liberated and brought down, then the foregoing objection applied to the surgical procedure in vogue must be taken strongly into consideration. They apply as well to the methods of approach from behind as in Kraske, or from the front (by the vagina) as has been recently advised. The latter I have not essayed, but an experience of over 20 cases of Kraske resection, 9 of which were followed by an attempt at union of the divided rectal ends, has markedly impressed me with the desirability of attacking high-lying cancer of the rectum in a somewhat different method.

Last year, i.e., in January, 1900, I ventured to practise such an extirpation after the plan that Maunsell (then of New Zealand) had advised.¹ His suggestion, as you may remember, was, to open the abdomen above the pubis, separate the peritoneum from the bowel largely, and then to pass a loop of tape by a long mattress needle from the opened pelvis through the rectum and out the previously enlarged anus. By this he proposed to pull down the neoplasm loosened

by its peritoneal divisions and by some additional blunt dissection and the finger, so that it would appear at the anus, everting the lower part of the rectum as it protruded. If the protrusion was accomplished, and to do this it might be necessary to acquire more room by freely dividing the anus back to the coccyx, then the tumor was removed and two ends of the bowel now, so to speak, out into the cold world, were easily connected with sutures and then replaced, the final step being the suturing of the divided peritoneum. This was a finely conceived operation but it did not work with me in my trial of it, the hitch being that the tumor would not pass through the divided anus and that the forcible traction enlarged the tape openings into the bowel so much that escape of its contents was possible. I therefore changed the plan of procedure in this way. My fingers had freely detached the divided peritoneum so that the bowel and the entire contents of the sacral curve were liberated behind nearly to the tip of the coccyx and in front to the edge of the prostate. This gave me room to tie around the bowel some three inches from the anus a couple of iodoform tapes about an inch apart. The intestine was then cut through and being free was readily raised out of the abdominal wound and held aside by an assistant. The lower end of the rectum was then seized by forceps in the hands of an assistant who drew it down and out of the anus in an everted condition. Untying the tape that closed this everted bowel, its lumen was opened so that a long pair of forceps could be carried through it up into the pelvis, when the end of the upper bowel was brought down within its clasp and by it the latter was drawn through the lower bowel out into the world. A couple of needles passed through the invaginated ends of the bowels, near their margins, allowed easy union by sutures of their edges with their knots inside the bowel and replacement of the same then was done. After the peritoneum had been sewn together and to the bowel, so that the pelvis and general abdominal cavity had been separated from one another by the peritoneal shelf, I deemed it best to provide drainage from the peri-intestinal space below by a tube introduced from just in front of the coccyx. These details will be better understood on inspection of Figs. 1 to 4 which accompany this paper.

The outcome made a delightfully satisfactory operation and its success justified its repetition in two other recent cases, all of which are here appended. Two of these recovered and one died, not from any peritonitis, but from a persistent diarrhea without temperature elevation. In the two that recovered inspection shows no recur-

¹ Lancet, August 27, 1892.

rence, eighteen months and nine months respectively after the operation. It was necessary in each case some three to six weeks afterward to use a No. 7 or No. 8 Wales rectal bougie, for there was somewhat more stenosis than is seen in the reunion of peritoneally covered bowel-ends. This, however, was to be expected in a measure. The patients are well and in good health, and have one or two movements daily with ease.

Some points are worth touching on a little more fully.

Concerning the Division of the Peritoneum.—

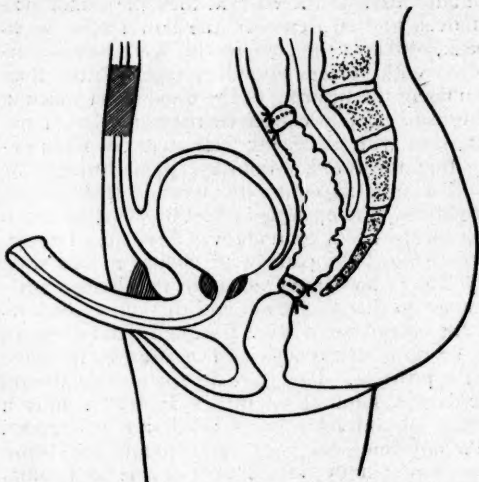


Fig. 1.—Tying off the tumor through an abdominal incision after separating the peritoneum from sacrum and bladder (or vagina).

By drawing the neoplasm backward the folds of the peritoneum stretching from the bladder in the male and from the uterus in the female are rendered prominent and a small cut is made in each; through these openings a pair of scissors curved on the side, or the common bandage scissors, can be introduced just under the peritoneum and this divided up to the bowel across and behind it. A transverse cut across the front of the bowel joining the two knife punctures frees the bowel entirely and by pushing downward anteriorly the prostate is soon reached. However, before peeling off the sacral tissues, I have found it advantageous to search for and to tie the superior hemorrhoidal artery, as this renders the operative field nearly bloodless. This exposure of the lateral curve can be carried much further upward should necessity arise in a hunt for enlarged glands. If the lower blade of the scissors is kept persistently against the under surface of the peritoneum no risk of damage to vessels, nerves, etc., is incurred.

As to Surgical Cleanliness.—The risk of this and similar procedures is, of course, the probable abdominal sepsis from the divided ends of the bowel. I have not only exercised generally particular care, but, as soon as the lower division

has been accomplished, have touched the divided exposed mucous membranes with pure carbolic acid which is promptly washed off with alcohol, and similarly treated the upper divided gut as it rests outside the abdomen. Prior to putting in the final sutures and while the bowel-ends protrude from the anus, this cauterized portion was cut off also. After the erosion of the lower bowel the whole pelvis is repeatedly washed out by sterile salt solution, being under good exposure by the retraction of the intestines above by pads, or by a broad wire-handled retractor, three by eight inches, covered with gauze, which admirably keeps them back like a diaphragm. I prefer this to a diaphragm that Maunsell originally proposed.¹

The Anus and the Drainage.—In my first case to enable me to extract the neoplasm by traction I freely divided the anus backward with somewhat prolonged impairment of power. In the other two cases only stretching in the usual way was resorted to. In all the cases a short drainage-tube was carried up to the site of the line of suture and inside the bowel was placed a small rubber tube covered with iodoform gauze. The signal precision of this operation, its freedom from hemorrhage and its thorough exclusion of the area of trauma from the peritoneal cavity led me to hope that it may come into more general use; it conduces to the desired end in such diseases, which is more thoroughness in their extirpation.

It is especially important to have a reliable assistant in this procedure. He should evert the

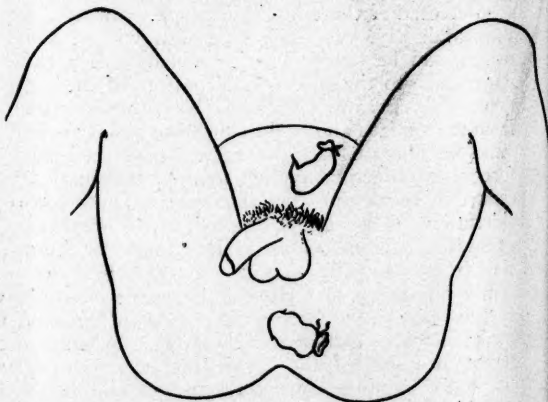


Fig. 2.—The lower end of rectum everted through the anus and the upper bowel drawn out of the abdominal cavity.

lower bowel, pull down the upper, conduct the suturing, replacement and drainage. The surgeon in charge had better restrict himself to the interior abdominal work and thus be able to maintain the required asepsis. It is true that the use of rubber gloves, so easily disinfected, or so readily changed as they are, will often do away with this need.

¹ Loc. cit.

Case I.—Mr. C. H., aged sixty-four; referred to me by Dr. Knickerbocker in January, 1900, with the history of pain in the lower bowel for over a year, with constipation increasing in character and with occasional attacks of obstruction. Loss of flesh moderate, not more than ten pounds. Some loss of strength. No anemia. On examination a carcinomatous mass could be felt about four inches from the anus. Into this the tip of



Fig. 3.—Upper bowel drawn out through everted lower end of rectum.

the forefinger could be passed sufficiently to enable one to determine that the mass above could be moved quite freely. The upper end of the neoplasm could not be reached.

On January 30, 1900, rectal extirpation by Maunsell's method by abdominal section was attempted, with the assistance of Drs. Frank Hartley, Foote and Taylor. Nitrous oxide gas with

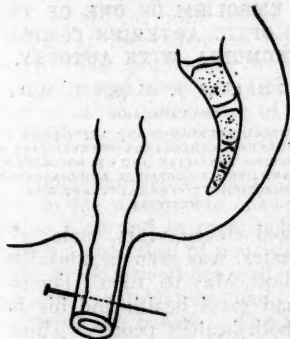


Fig. 4.—The ends of the two portions of the bowel sewn together.

oxygen was administered by Dr. Goldan. The bowels had been freely moved on the previous day, as I do not like fecal flooding at the time of operation. After the abdomen was opened a transverse septum of gauze, three by eight inches, stretched on stout copper wire was used to retain the the small intestines above the pelvis. It answered its purpose very well. The

peritoneum was cut through on each side of the rectum back to the sacrum, also across just behind the bladder. The contents of the sacral curve were peeled off after tying the middle sacral artery. Several small glands were found here. None could be found above the upper limit of the peritoneal division. An attempt was made to pull down the growth by means of a loop of tape drawn through the upper part of the tumor out through the anus, but this failed although the anus had been enlarged and the rectum itself previously dilated by Dr. Hartley with specula and fingers. The tugging not only failed, but tore the gut badly and was abandoned as impracticable. Therefore a tape of iodoform gauze was applied around the rectum below the tumor and a clamp was fastened just above this. On dividing the intervening intestine it was possible to lift the tumor out of the abdominal cavity, and, after a little further liberation of the peritoneum covering the mesentery, the tumor, which

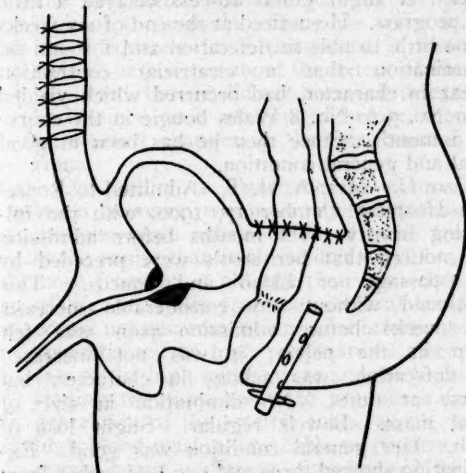


Fig. 5.—The everted bowel replaced, with posterior drainage and the divided peritoneum so sewn together as to shut off the general peritoneal cavity from the pelvis.

was four inches long, its upper limit being between eight and nine inches from the anus, was cut off. The tied end of the bowel remaining was sterilized with pure carbolic acid as was also the anal end of the rectum left in the pelvis. Dr. Hartley with forceps then seized the lower portion of the bowel and, everting it, caused it to protrude through the anus. Another introduction of the forceps through the everted gut caught the end of the upper bowel and this in turn was drawn through the everted anal portion. Both ends of the rectum were held *in situ* for a time by two long straight needles passed across their wall at right angles near the suture line, which was freshened by cutting off the cauterized flaps. Between 20 and 30 interrupted fine chromicized catgut sutures were used to close the circumference of the bowel. I then drew up into position by slight traction the

united portion. The divided peritoneal edges were carefully sewn together by interrupted sutures after free irrigation of the raw pelvis, which was drained from below by a drain inserted through the wound and reaching to the coccyx. The operation lasted over three hours by reason of the time spent in endeavoring to pull down and drag out the tumor in accordance with Maunsell's directions. The patient did not suffer from shock, but there was complete muscular and sensory paralysis of his entire left arm. During the anesthesia both arms had been fastened above his head which latter was done for ease of working the somewhat cumbrous apparatus of the mixed anesthesia, and had been kept strongly to the right side thus all the more stretching the brachial plexuses. It may be said that it required some six months for him to recover from this, my first, experience in positive paralysis. His recovery from the operation was satisfactory and prompt. He was up and about in three weeks. A slight mural abscess delayed a little his progress. He noticed at the end of six weeks some little trouble in defecation and I found on examination that a cicatricial contraction linear in character, had occurred which yielded to a No. 3 to No. 8 Wales bougie in the course of a month. Since then he has been in good local and general condition.

Case II.—Mrs. A. H. T. Admitted to Roosevelt Hospital, October 17, 1900, with the following history. Six months before admission she noticed that her stools were preceded by the passage of blood and mucus. This continued without any considerable increase. Six weeks before admission pain was felt deep in the pelvis; it was not increased by defecation, was aching in character, but worse at times. No diminution in size of fecal mass. Bowels regular. Slight loss of flesh. Her general condition was good. Examination showed three and one-half inches from anus an ulcerated mass one and one-half inches in width attached to anterior and left side in a sessile manner; the finger could not reach above it; it was slightly tender, but not markedly hard; there was no constriction; no glands were felt; no bleeding from examination; rectum slightly movable.

October 27, 1900. Anesthetic, gas and ether. Trendelenburg position. Celiotomy in median line; intestines retracted upward by gauze-covered retractor. Tumor found running upward and involving the upper part of rectum and lower part of sigmoid. Peritoneum divided on each side of diseased gut. Four and one-half inches excised between ligatures. Distal stump invaginated through rectum and anus. Ligature removed; proximal stump then drawn through invaginated distal portion; a circular enterorrhaphy done outside rectum. Gut again retracted into abdominal cavity; peritoneum sutured over it. Abdominal wall closed. Drainage tube inserted posterior to anus. Operation almost bloodless. Carcinoma involving lower sigmoid and upper rectum along anterior and lat-

eral walls for three inches; glands in hollow of sacrum not much involved; tumor movable. Uneventful recovery; bowels moved on the ninth day; all drains removed and wounds healed by the fourteenth day; slight discharge of muco-pus from rectum for two weeks more. The patient then developed pulmonary tuberculosis; transferred to medical side from which he was discharged improved, December 20th, 1900. Three months after the operation a smooth hard stricture was felt, admitting No. 6 and No. 7 Wales bougie. Movements twice a day. In good general health when seen in May, 1901.

Case III.—Man aged fifty-four years, sent to me by Dr. Forman of Freehold, N. J., with a history of rectal trouble of many months' duration. On examination a carcinomatous ulceration was found stretching from about two and one-half inches from the anus upward, so that deep above the pubis its impulse from below could be felt. The patient was only in fair condition.

The operation was done in the manner previously described, but it varied in two ways. There was much more than the usual oozing, and, after opening the peritoneum and separating the wall, it was found that the infiltration of the carcinoma extended along the right lateral wall toward the anus, so that there was at this point not more than one to one and one-half inches of sound intestinal wall. This in its eversion demanded its truncation and also additional loosening of the upper bowel from its mesentery. The other steps were as usual. The patient did well for twenty-four hours and then began to have a diarrhea, without pain, vomiting nor distention, which was uncontrollable and which brought about a fatal issue at the end of the fourth or fifth day.

A CASE OF EMBOLISM OF ONE OF THE RIGHT LENTICULO-OPTIC ARTERIES COMPLICATING PNEUMONIA, WITH AUTOPSY.

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H. W., aged eleven years, male, white, born in United States, was seen in consultation with Dr. A. S. Elliott, May 16, 1900. The patient had previously had good health and his father and mother are both healthy people. Three children of this family have died; one from an aural abscess; one from pneumonia and the third, while in apparent good health, was seized with convulsions and died without regaining consciousness. There remain three other healthy children. The mother has never had a miscarriage nor stillbirth.

The boy's illness began May 3rd. He returned from school complaining that another boy had struck him on the left shoulder with a baseball bat. His brother, with whom he slept, said that he tossed about all of that night. A physician was called in the morning who thought the dif-

ficulty was due to a cold and left some medicine, but called later in the day and found the boy in delirium. He had quite a high fever and a dry hacking cough. The next morning when the physician called he found the patient better and said that it was unnecessary for him to call again.

The boy became delirious before night and Dr. Elliott, the family physician was summoned in the morning and found him with a temperature of 104° F.; rapid pulse; coughing; spleen slightly enlarged and abdomen tympanitic; slight diarrhea and stools of a pea-soup green. He made a diagnosis of croupous pneumonia with a possible typhoidal infection. The high temperature continued for several days and then began to recede gradually, although he continued in delirium.

Four days preceding my visit, and on the ninth day of his illness, he began to have general jerky, choreic movements which continued without intermission for over twenty-four hours, at the end of which time, it was noticed that he no longer moved the left arm or leg; the face, however, was not drawn to one side. The pupils were wide throughout his illness. There had been no skin eruption and he did not complain of stiff neck, neither was there any rigidity of the neck or spine. Since the advent of the paralysis he had lain in bed with his head turned toward the right with a conjugate deviation of his eyes toward the same side—away from the paralyzed side.

Examination.—The boy is of good height for his age, rather thin, face is pale. He lies with his lips apart, between which can be seen his teeth covered with sordes and a foully-coated tongue. It is observed that he does not move the left arm or leg, that his head is turned to the right, and, also, that both eyes are looking toward the same side, a typical conjugate deviation—turning and looking away from the paralyzed side and toward the brain lesion, as it were, thus demonstrating the lesion to be destructive in character. The pupils are widely dilated and react slightly and slowly to light. There is no evidence of other disturbance of the ocular muscles. Neither are the facial muscles weak nor paralyzed.

The ophthalmoscope fails to reveal any changes in the disks. He answers questions in a whining tone and in monosyllables only. He takes quite a good deal of nourishment and seems to digest it. He swallows well, sleeps well, and during our examination had an involuntary movement of the bowels. The abdomen is flat, liver slightly enlarged and the spleen not palpable. There is neither rigidity of the back nor legs, and, except the muscular spasm which turns his head to the right, there is no rigidity of the neck. *Tâche cérébrale* is very marked, knee-jerk cannot be elicited on the right side and is so faint as to be questionable upon the left. The various skin reflexes on both sides of the body are normal and there does not seem to be any loss of sensation. Titulation of the sole of the

right foot produces the normal movement of the toes, but Babinski's sign is present in the left foot. The pulse is 115 and slightly irregular. The pulmonary second sound is practically absent and the normal pauses between the sounds are so greatly shortened as to have a fetal character (embryocardia). There is a slight increase of dulness to the right of the sternum and we are of the opinion that his right heart is greatly engorged and that dilatation and rapid failure are taking place. The respiration is hurried, but regular. Coarse râles can be heard over the left lung, but the right lung is quite dull on percussion. Over the latter lung, about its center and upper portion, can be heard bubbling râles, evidence of beginning resolution. Temperature in the rectum 103.5° F.

Diagnosis.—It was comparatively easy to make a diagnosis of a destructive lesion which involved the leg and arm fibers of the internal capsule posterior to the facial fibers, without, however, producing marked changes in the sensory tract and the extreme hinder part of the posterior limb of the capsule. Since we were unable to test adequately for hemianopsia, it was impossible to be positive about the extent of the injury backward, but we did not believe it to extend far back, since, as it was stated before, there were no marked changes in the integumental sensorium.

Our ability to determine the nature of the lesion, however, was not so exact. Hemorrhages into the brain substance occur more frequently in the young than in the middle-aged, but are far more frequent in old age than any other period of life; it is also true that cerebral hemorrhage occurs not uncommonly in acute infectious disease characterized by high temperatures since the effect of the high temperature and the toxins occasioning the same seems to produce a fatty degeneration of the arterial coats, which, with the high blood-tension, are liable to rupture. Pneumonia being a disease characterized by a low blood-tension, one would hardly expect a hemorrhage from rupture of the arterial wall, and especially does this obtain in this case, since the heart was evidently in a state of acute dilatation and was rapidly failing. The tendency of the blood in pneumonia to develop a very large amount of fibrin, the presence of a failing right heart—so liable of itself to cause clotting—made it quite natural that we should think of a bit of fibrin being driven into one of the cerebral arteries, hence, a diagnosis was made of cerebral embolism of one of the smaller cerebral arteries and quite certainly one of the lenticulo-optic arteries. An unfavorable prognosis was given.

The patient died on the following day from heart exhaustion following the acute dilatation. A postmortem examination was made, Drs. Elliott and F. Y. Allan assisting. The liver was found slightly enlarged; spleen practically normal in size. There was evidence of considerable irritation of the mucosa of the intestines; this irritation was undoubtedly the cause of the

tendency to diarrhea which was manifested during the whole course of the boy's sickness. No evidences of typhoidal ulceration were discovered. The right lung was almost completely consolidated, resolution was advancing, however, in such a manner as to indicate that, had not the brain been subjected to embolic insult, recovery would have been quite certain. The left lung was slightly engorged, but contained no pneumonic deposit; there were no pleural adhesions, and but a small quantity of fluid was found in the right pleura. The heart sac contained a slight excess of fluid, and the right heart was sensibly flabby, dilated and thin. Its cavities contained some very firm fibrinous clots which were probably formed during the death agony, if not some time before. They were certainly much more firm than usually found in the hearts of those dying from pneumonia.

After removal of the calvarium the brain and its membranes seemed normal, with the exception that the vessels were slightly injected. On section of the brain an area of softening was found occupying the region of the posterior half of the right lenticular nucleus, and the hinder part of the posterior limb of the internal capsule, involving to a slight extent the optic thalamus. A later search revealed a complete embolism of one of the middle lenticulo-optic arteries. The vessels in other portions of the brain seemed to be perfectly normal and we were unable to find other patches of softening. Without result the spleen and liver were also carefully sectioned in our attempt to determine the question of further embolism.

In examining the literature of cerebral embolism complicating pneumonia, one is struck by its very rare occurrence. This seems peculiar when we take into consideration the great tendency on the part of the blood in pneumonia to develop fibrin.

Da Costa has reported six cases of phlegmasia alba dolens in pneumonia. Anders states that venous thrombosis is seldom seen and embolism of the larger arteries is a rare complication. Also, that cerebral embolism causing aphasia and even hemiplegia has rarely been observed.

Loomis in speaking of the cerebral complications of croupous pneumonia says: "A very rare occurrence is partial paralysis of the muscles which were involved during the convulsive period; such paralysis is often permanent."

Osler says: "A rare complication is embolism of one of the larger arteries. I saw an instance in Montreal of embolism of the femoral artery at the height of pneumonia, which necessitated amputation at the thigh. The patient recovered. Transient aphasia has been met with in a few instances, setting in abruptly with or without hemiplegia."

I have been unable to find other references to the subject in any recent literature, but it is possible that such cases are not as rare as we would infer from this partial examination of the subject.

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AN ATTEMPTED INVESTIGATION OF SOME CHRISTIAN SCIENCE "CURES."

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ALTHOUGH epidemics of mental disease which have usually been connected with either religion or finance have been quite numerous in the past, the prevalence of them whether in this country or elsewhere should cause no surprise when we remember that man is a gregarious animal, that the average individual is always ready to believe some part of whatever is suggested to him, and that the world has never been destitute of lunatics and charlatans whose object has been—and is—to pose as leaders and philanthropists. If the external manifestations of the contagious mental disorders of to-day differ from the various forms which history has recorded, the explanation may be easily found in the ever-present evolution of man and of his environment.

"The vast majority of persons of our race," says Francis Galton in his *Inquiries into Human Faculty*, "have a natural tendency to shrink from the responsibility of standing and acting alone; they exalt the *vox populi*, even when they know it to be the utterance of a mob of nobodies, into the *vox Dei*, and they are willing slaves to tradition, authority and custom. The intellectual deficiencies corresponding to these moral flaws are shown by the rareness of free and original thought, as compared with the frequency and readiness with which men accept the opinions of those in authority as binding on their judgment."

Last September it occurred to me that it might be desirable to investigate some of the remarkable "cures" made by Christian Scientists, of which we have heard so much. Having read a letter in the *Buffalo Express* concerning a "cure" of consumption by Christian Science methods, I wrote to the author of the communication asking if by "consumption" he meant phthisis, and if he would favor me with the name and address of the person who had been "healed." My efforts were in vain. My letter directed to Willard S. Mattox, New York City, was returned to me by the post office. The gentleman could not be found. His address is not in the directory for 1900. The reader can place his own estimate upon the value of the testimony of a man whose residence is so difficult to discover that mail does not reach him.

I was recently given a copy of the *Christian Science Sentinel* of January 31, 1901. This contains three testimonials. One of them is from a lady who asserts that Christian Science enabled her daughter, aged fifteen years, to have her teeth attended to without the dentist causing the child any pain. The mother, whose address is Jacksonville, Fla., has not answered my letter asking for the name of the dentist, so that I have been unable to get any details concerning this remarkable "demonstration."

A little more than a column is taken up with the testimonial of a woman who claims to have been cured of a "cancerous growth" on her breast

and under her arm by studying Science and Health with Key to the Scriptures. The story reads very well, but I am in a position to prove (1) that the carcinoma was removed in a hospital by an eminent surgeon about seven years before the woman became a Christian Scientist, and (2) that the superintendent of the hospital has in his possession a letter from his patient, written two years after the operation, in which no mention is made of any return of the carcinoma.

I refrain from wasting valuable space by giving further details.

The third testimonial is from a woman who asserts (1) that she has been relieved "of a growth," and (2) that her husband has been "healed" of smoking and the liquor habit and of Bright's disease, pronounced by the physicians to be in its worst form?

First, as to the husband, the physician to whom I wrote has informed me that neither he nor his colleague ever found proof that the patient was suffering from nephritis. His condition was due "to congestion superinduced by excessive use of alcoholic liquors." The Christian Scientists, of course, deserve credit for the man's reformation, "which," writes the doctor, "is all the cure that has been effected." The man, having ceased to drink heavily, and having stopped the excessive use of tobacco, has given his kidneys and liver an opportunity of resuming their normal functions. As he never had "Bright's disease," the "healer" cannot be said to have cured that disorder.

Concerning this man's wife and the "growth" of which she was relieved, she gives me to understand that she made the diagnosis herself, and from her very long letter it is quite evident that this "growth" only existed in her imagination. I am told that fermentation in the stomach or intestines frequently produces the feeling of a lump. Mrs. M. does not pretend that any physician ever told her that there was a growth in her stomach. I cannot ask for the publication of this woman's letter, as it would occupy almost a page. "Tumor," "dun," "Piticular trouble," "simtons," "pureafying," "softning," "my husband never wrights," and "very Trouley yours," are samples of what it contains.

On March 20th I visited a "healer," Mrs. L., having previously been informed that she was an educated person who had taken a course in medicine. I soon discovered that this was an error and that she was quite ignorant of the difference between apoplexy and epilepsy. She professed to have cured the former, which is, of course, a symptom rather than a disease. It must be remembered that I am not a physician, but her description of the case suggested to my mind an ordinary epileptic fit, such as I have often seen on the street. The sufferer recovers in a short time without medical aid, and, in due course, repeats the performance. When I asked the lady if she did not mean epilepsy, not apoplexy, she answered that the "patient" never had

another fit, but that she had not studied "physics!" In reply to my enquiry "How did you make your diagnosis?" Mrs. L. said, "I cannot explain; we do not use the word diagnosis." The thought came to me that it must be "apoplexy." Answering a further query, she informed me that she had never before witnessed a case of apoplectic seizure.

I am well aware, I need hardly say, that no scientific man ever wastes his time in arguing with a person who suffers from delusions. But, as this was my first (and probably my last) interview with this woman, it seemed desirable that I should attempt to ascertain whether the fallacies with which her mind was burdened could be removed by argument or not. When, therefore, she made the interesting assertion that the heredity of consumption was due to one generation after another believing that the disease was transmitted, I flatly contradicted her and explained in non-technical language the history of the Koch bacillus, the evidence of the heredity of the phthisical diathesis, and the impossibility of a micro-organic disease being hereditary in the proper sense of the term. I made no impression whatever, for her last word upon the subject was, "The doctors always call consumption a hereditary disease." This expression was not sufficient to convince me that the woman was the victim of delusions, nor was I convinced when she told me that, having read some of Darwin's works, she was sure he was wrong in his belief that "life came from dead matter." She was unable to remember the name of any single book written by the great biologist.

Replying to my question "Do you assert that there is no such thing as disease?" the lady talked for about fifteen minutes upon the Old Testament and the New without giving me any "information," except that the Old Testament was originally written in Greek! Upon my interrupting her dissertation, which had nothing to do with my query, she assured me that she could not answer unless I permitted her to begin at the beginning. As my time has some value, I dropped the subject and asked, "Can one become a 'healer' in twelve days by attending the Boston Christian Science School?" I understood the answer to be in the affirmative, provided the student does not want to "treat obstetrical cases," but further conversation led me to believe that my informant meant gynecological cases. I then asked the following questions:

"Mrs. L., will Christian Science eventually be able to do away with death?"

"That will be the last thing for us to overcome."

"When a healer is called to treat a sick person, is the first order 'dismiss your physician?'"

"Yes; when the patient recovers, the doctor would claim the credit. Besides, his methods interfere with our spiritual cure."

I am afraid that I have been unable to remember the exact words of the answer to the last question.

Up to this point, with the exception named, I had ignored every absurdity uttered by this woman, and had asked a further question as soon as she ceased answering the previous one. As I was about to leave, she volunteered the statement that prior to becoming a "scientist" she had been unsuccessfully operated upon by a surgeon twenty-nine times in the course of two years, chloroform having been given to her upon each occasion! This seemed to be strong evidence of delusion. I now changed my method, with the object of trying to find out whether Mrs. L. was to be regarded as a lunatic or as a charlatan. I am bound to confess, however, that delusions alone do not, in my opinion, prove insanity. We have no absolute test of insanity, because there is no distinct and dividing line where sanity ends and insanity begins.

Having defined the word "operation," I told Mrs. L. that 29 operations in two years meant an average of more than one operation per month. She gave me the name of the "operator," after a good deal of pressure, and said that he not only operated, but also administered the anesthetic! No other person was ever present, she said, except "a lady" (nurse, I suppose), whose name she refused to divulge. Having had a legal education, I am not of a credulous turn of mind and I never believed one word of this statement. Nevertheless, I have investigated it very carefully.

This "healer" tells the story of twenty-nine unsuccessful operations to her "patients," and then informs them that she was eventually cured of stricture of the rectum by Christian Science. The tale is devoid of foundation. No surgeon habitually performs operations which need the use of an anesthetic without the presence of a second medical man. No surgeon operates once a month for two years. Moreover, the late Dr. Q., whose name I dragged from this woman, was a very skilful and much respected physician, not a surgeon, who never made a practice of operating at all. His son informs me that the whole story is untrue, as far as operations are concerned. The late Dr. Q. may have treated Mrs. L. for stricture of the rectum by gradual dilatation—or otherwise.

As I have already explained, I am not a physician, much less an alienist; outside a limited amount of legal experience, I have had little opportunity of studying mental pathology, but it is fair to say that I have read, with the greatest care, the works of Clouston, Maudsley, Spitzka, Griesinger, Mercier, Hammond and others. In my opinion, formed in the course of one interview of an hour's duration, Mrs. L. believes all she relates and is not an impostor. I must add that further conversation with her and investigation of her antecedents might alter my opinion.

At one of the hearings at Albany upon the Bell Bill regulating the science of treating disease by uneducated persons, a speech was made by a Buffalo "healer" named George H. Kinter. I was not present, and consequently do not know of

my own knowledge what he told the Committee, but according to the *Buffalo Express* of February 14th last, on the subject of diagnosis, Mr. Kinter said he had been a reader for twelve years and had not yet been accused of killing anyone or making a mistaken diagnosis."

Within the past three years this same Kinter has been charged with manslaughter in neglecting to summon medical aid to a child who was suffering from pneumonia. The child was not Kinter's; its parents, poor dupes, were Christian Scientists, and he was attempting to "heal" it by his absurd methods. It is true that the Grand Jury did not indict him, but that does not affect the point under discussion. If he should see this article, he will, of course, deny the accuracy of the report in the *Express*.

The *Christian Science Journal* for January last contains fourteen testimonials from persons who profess to have been "healed," and who give their names and addresses. A suitable letter was sent to thirteen of these, requesting details, and a stamped envelope was inclosed for an answer in every instance. Two persons have not replied, and two of my communications have been returned by the post office. Of the remaining nine "scientists" who have answered, only four can be said to write fairly accurate English. Three of the others are utterly illiterate. In order to demonstrate to some extent the accuracy of this assertion, I give here the testimonial given in the *Christian Science Journal* by Mrs. McC—, of M—, and her letter to me. The former was, no doubt, written by a "healer," and afterward signed by the dupe.

Testimonial from Mrs. E. McC. in Christian Science Journal.

"When only six years of age I was taken with epilepsy. We sought first one doctor, then another, for help, but there was none. I suffered not only from the fits, but other diseases took hold of me. For weeks at a time I would be perfectly helpless with rheumatism. Add to all this two operations which brought no relief, and does any one wonder that for me life seemed a mockery? One day about four years ago my husband stopped at neighbor's and found them rejoicing over the recovery of their daughter, who had been deaf for fourteen years, and now had received her hearing through Christian Science. Upon learning what had healed her my husband hastened home with the good news that he had at last found something that would heal me. Full of hope that it would be even as he said, we went to the healer who had brought back the girl's hearing. In two weeks' time I was healed and I am well and strong, able to do any amount of work, to the amazement of my friends who knew of my condition. I am now a member of the Mother Church, and my heart overflows with gratitude to Mrs. Eddy, who has taught us how to know God and be free. I am also grateful to my healer who was instrumental in bringing me health."

Letter from Mrs. E. McC. to L. Irwell, Feb. 8, 1901.

"Dear Frend I Reseaved your Kind and wilcom leter which gave me Plesher to hear that there is more lucking for this Blessed truth I Had the Clame for 22 years Ever Since I was 6 years Ould Thare is Noting in posiable for God be fore I Came to C. S. I lucked like a Shadow on the wal Now I way 175 Pounds and I can Due all kinds ove work and I go to C. S. meatings no mater How the weder may be we most take ony C. S. with a Good oniest Hart I Remane your Sister in truth

"Mrs. E. ——— McC. ———,

"M. W ———

"Hoping to Hear from [you] soon"

I have frequently been told of the high order of intelligence of the supporters of Eddyism, but my experience leads me to the conclusion that most Christian Scientists are extremely ignorant people. What else is to be expected when the woman Eddy herself writes of "the emptiness of knowledge, the nothingness of matter and its imaginary laws. . . ." (This quotation is taken from J. M. Buckley's "Faith-Healing," page 246.)

Testimonial No. 14 appeared to me unworthy of serious investigation. It is signed by a woman, Mrs. Annie S ———, wife of the master (i.e., the Head) of one of the colleges of the English University of Cambridge, who relates that her husband, a disbeliever in Eddyism, was assisted in getting rid of a cough by his spouse's "scientific" methods, and did not find it necessary to use some lozenges which he had bought.

Mrs. J. K. of E ——— relates how she was healed of catarrh in the head and "had a tumor disappear also." Unfortunately, she was unwilling to tell how she knew that she had catarrh, although I requested her to do so in three different letters. She assumed that I was suffering from some disorder similar to her's, and advised me to visit a Buffalo "healer," whose "address" she gave. Having implored me to be "obidient," she concluded with, "Read Mark 5-25 & 26 also John, 4-12 I am yours sincerely in Truth and Love." It seems a pity that I have been unable to induce this woman to favor me with the name of the physician who treated her for catarrh.

Mr. A. L. F. of S ——— got a hot cinder into his eye. He testifies to the cure of this serious affliction by the day following the accident. But his own witness, who is not a "scientist," writes me that the eye "was all well in a couple of days." Mr. F.'s words in the *Christian Science Journal* are, "By the next morning all trace of the eye having been burned at all had disappeared." Even if his statements were correct, nothing remarkable has occurred. He evidently forgot to "coach" his witness, from whom I have now received a second letter, which reads as follows: "I read 'Science & Health' during the period Mr. Fink hurt his eye—the book may seem reasonable to some persons, but to me it does not—especially in this enlightened age—as I told you before, I

have not the least faith in the work, and further I do not care to discuss the subject—and I wish to say that I do not want my name used as a testimonial in Mr. Fink's incident. Strong will power, in my mind, has a great deal more to do with a case like Mr. Fink's than anything else—I have seen *too* many cases result fatal in this city to have anything to do with Christian Science."

Mr. G. E. C. of C ——— appears to have had some curious experiences. He has "had two cases of broken toes and two of broken fingers and thumb healed without even a bandage, court plaster, or bathing of wounds, one a very bad compound fracture." He did his "own work on these cases. The battle was the Lord's—He delivered him." Nor is this all. In a street-car collision he was thrown "fifteen feet" . . . but "escaped with only a small bruise on one finger." . . . "The claim of shock seemed to come up afterward, and was met and mastered by a sister scientist here. I could write all day of His loving kindness, and of His mercy which endureth forever."

Mr. C.'s reply to my first letter was dated at C ———, but with neither street nor number. He informed me that his "use of the word compound was different from the doctors," and that his "thumb was broken at first joint—set type with it every day until it was completely healed, also did some work with other finger, working eight hours a day in both cases." His final sentence is "Are you a Christian Scientist?"

As I considered this curious epistle most unsatisfactorily, I again wrote requesting the gentleman to kindly tell me how he knew that his thumb was broken at the first joint, and in what sense he used the word "compound." I ended my letter by saying "I have no interest in this matter beyond a desire to ascertain the truth."

Within a few days my communication was returned to me with the last sentence underlined, and the following words written upon the back of it, a postscript upon a separate piece of paper being enclosed. This masterpiece is worth printing.

"There is but one TRUTH. You can find it in *Science and Health* and the Bible—by reading the two combined—as to how I *knew* my thumb was broken—I knew it the same as you would know some portion of your body was injured—that's the best way I can explain it to you. I also by the same evidence know when it was healed—my address is No. 9 West 4th St.—am engaged in newspaper work—have no time for answering letters for mere gratification of *curiosity* but am willing to help a brother in need of help—the work I am in really takes up too much of my time—which I should prefer to devote to other things. In haste, etc.

"P. S.—As to the question of knowing—there are a large number of people who *know* some few things besides the men of letters—even little children are sometimes smarter than their parents—and an animal *knows* when he's hurt."

Mr. J. A. K. relates that he fell "a distance of about forty feet on a pile of broken rock . . . but broken bones were skilfully set" by a surgeon. For eight years he "continued under the care of different doctors of *materia medica*, and tried almost every so-called remedy suggested for rheumatism in one of its worst forms, sometimes having relief for a few days." He admits having been a "tippler," and relates that within a month of beginning to read *Science & Health* he was healed of rheumatism and "tippling."

On March 1st, I wrote to Mr. K., asking him to kindly favor me with the names and addresses of some of the physicians who had treated him. To this request, he sent me the following answer, which reached me on March 14th.

"Your letter of Inquiry at hand as to my sending you the names of the different Doctors who treated me for Rheumatism, I cannot do so without their consent although There are one or Two of them Residing in Scranton. I have not as yet been able to see them, but will at the earliest possible time, and then if they are willing will do as you wish. One of these *Physicians* is also the one who attended me at the time of the *accident* I can furnish you the names of some of my acquaintances, who are well acquainted with the facts as stated in my testimonial. I have had so many proofs of the Potency of Truth in overcoming error of different sorts in my family for more than four years. That I do not hesitate in offering what little I have to any honest Inquirer. I know that the Teaching of Our Text Book S. & H. with Key to the Scriptures By Mary Baker Eddy are True The Truth that makes free. Will *communicate* with you again at my earliest convenience and furnish you what you desire if *permitted*."

Having heard nothing further, on March 26th I again wrote to Mr. K. reminding him that my request for the names of his former medical attendants had not been complied with. Upon April 14th, I received a short note from him in which he gives, not the names of the physicians under whose care he had been before becoming a "scientist," but the names of some persons who are said to have known of his "healing!" I never asked him for these names, which are worthless for my purpose, and all I ever requested him to do was to send me the names of his former physicians. I have no hesitation in saying that this man's letters show that his intelligence is limited. (Since the completion of this paper, a further letter, characteristic of Mr. K., has reached me.)

Mrs. A. L. J. claims to have suffered from "stricture of the intestines in two places." She relates that she "was sentenced to the uncertainty of an operation or to sure death without it, by different specialists in Kansas City and by one of the best physicians of this place" (Joplin, Mo.). It is impossible to rely upon Mrs. J.'s statements, since Dr. W. has sent me a full account of her case, and has shown very clearly that he cured her of stricture of the rectum be-

fore she became an Eddyite. The treatment lasted from March 12th to June 12, 1900. It is true that Dr. W. did tell her that if treatment failed, an operation might be necessary. Mrs. J. is not an educated woman, and her letter to me, which covers eight pages, written on both sides, is largely devoted to explaining the methods by which I could become a Christian Scientist, instead of giving details of her "cure." Her epistle ends with "I am not looking for patients as I am not a *practioner*." No useful purpose could be served by giving further particulars.

Mr. C. G. M. "suffered for twenty years with eczema in its worst form." He "tried everything in the line of patent medicines, besides consulting the best physicians," but was told that he would "never be healed." He was "healed" by Christian Science in six months. His wife was "healed" of rheumatism, and his little daughter of inflammation of the lungs in a few hours! Mr. M. is a professional "healer." His answer is in the handwriting of a woman, and the expressions used are those of a woman. The signature is in the same writing as the body of the letter. Among many curiosities, I notice the following: "If I thought you doubted the truthfulness of my statements I would not answer them. But I think you must be to (*sic*) much of a gentleman for that." Being anxious to investigate these "cures," I sent a second letter repeating my questions. This letter was registered. It appears that Mr. M. has filed at his post office a form of authority for another "healer" to receive his mail. The answer to my second communication gives me no additional knowledge, as the writer refuses to disclose the names of his former doctors, for the bizarre reason that it "might be unpleasant to them," and he ends with an intimation that he must cease corresponding with me. There are some suspicious circumstances connected with this case, in addition to the facts that the man did not sign for his own registered mail, and that his letters are apparently written and signed by a woman. My three specific questions, repeated twice, are ignored.

M. S. R. of F. W. is a child "not nine years old yet," whose testimonial in the *Christian Science Journal* is remarkably well expressed. She says that she had "a belief of scarlet fever," and that her mamma treated her "with Christian Science." She was in bed "only two days," and she felt very much better after her mother had read *Science & Health* to her. The child's testimonial contains the following words: "I have treated papa several times and healed him." Being naturally curious to see a specimen of this prodigy's handwriting, I wrote asking her how long she was home from school with scarlet fever, and of what disorders she had healed her father. After much delay, I received a letter from the child's mother, who tells me that she is the first reader at a Christian Scientist Church, and that "it is 7½ years since the children have had a drop of medicine." It is quite evident that this lady regards me as a lunatic, for she writes that her

infant "began treating when she a little over two years old!" No sane person would believe for one moment that any child of two and one-half years could understand that the word "treat"—even by Christian Science—means. Mr. R. has, it seems, "been healed of many little beliefs by Mary, headaches, sore throats, etc." As these trivial complaints disappear without treatment when the sufferer is an ordinary person, it is very easy to understand in what sense this remarkable infant "healed" her father. The mother says, "We called an M.D. in at the time of the scarlet fever. . . . We were at home for fourteen days, tho' Mary was really only confined to bed from Sunday afternoon till Tuesday lunch." I need hardly say that it has been a great source of satisfaction to me to learn that at least one Christian Scientist father had sufficient intelligence to summon a physician when his child was attacked by a "belief" of scarlet fever.

For the purpose of enabling the readers of this article to form their own opinion of Mrs. A. J. R., I give here my second letter to her and her extraordinary second letter—to call it a "reply" would be an unwarrantable use of that word.

Letter from L. Irwell to Mrs. R., Buffalo, N. Y., April 3, 1901.

"Answering your favor of 29th March, may I ask you to kindly explain to me what you mean when you say that your daughter Mary 'began treating when she was a little over two years old? Do you mean that an infant of two years of age can understand what the word 'treatment,' either in the Christian Science sense, or in any other sense, means? Have you any objection to giving me the name of the physician who visited your children when one of them had scarlet fever?"

"Thanking you, in anticipation, for your reply, I am, etc."

Letter from Mrs. R. to L. Irwell, April 5, 1901.

"Your letter rece'd. I answered your last letter in good faith, thinking you were either a Christian Scientist, or intended to be one, Jesus took a little child and set it in the midst of them. I thanked God that these things had been hidden from the wise, and prudent and revealed unto babes, and now my turn to ask questions comes—why are [you] asking questions of me. Do you desire this Pearl of great price (Christian Science)? If you do, I would refer you to Mrs. Anna V. C. Leavitt, who is First Reader in First Church of Christ Scientist of your city. I am not personally acquainted with any of the Scientists in Buffalo. But I can assure you that all strangers are welcome to the Reading Rooms and to all services. Would advise you to go to a Wed. P.M. Testimonial Meeting. God will lead you and guide you. If I understood the motive of your questions I would gladly help you out. I am indeed thankful that I am trying to be a C. S.

"(Mrs.) A. J. R.

"Read the C. S. Journal for April.—J. H. S. R."

The last testimonial is from Miss K. P. of M—. This lady had "a severe claim of neuralgia," and although tempted to use "hot water to alleviate the suffering," refrained from doing so when she remembered that she "needed no help, but His, no water, but the pure invigorating water of Life . . . which cleanses all impurities." This lady's letter to me is merely a copy of her testimonial in different language. As I occasionally suffer from neuralgia, and as it goes away in due course without any treatment whatever, I cannot avoid the conclusion that Miss P.'s "cure" does not demonstrate the efficacy of Christian Science methods, as far as neuralgia is concerned.

Are Christian Scientists insane? I cannot pretend to say whether any class of persons is sane or otherwise, for, in spite of the opinion of alienists of repute, facts which might prove the insanity of one individual would not, in my estimation, prove the insanity of another. If I insisted that man is not an animal and that a whale is a fish, those delusions would certainly prove insanity upon my part; but perfectly sane women—perhaps men also—can be found who cannot be convinced that both assertions are false. The general education of some of these persons may be fairly good, but they are, nevertheless, unable to appreciate technical definitions. Again, I can produce a sane lawyer who insists that phrenology and palmistry are true, notwithstanding every possible effort to prove to him that these absurdities are mere "fakes." Such cases could be cited *ad infinitum*. In a paper upon the "Relation Between Phthisis and Insanity," read before the American Public Health Association in 1896, I said: "I frankly admit that, in my humble opinion, no absurdity of belief nor extravagance in conduct or behavior is alone conclusive evidence of insanity." To that view I still adhere.

It is not practicable to construct a complete and accurate definition of the term "insanity." The late Lord Justice Blackburn, an eminent English lawyer (and judge), when a witness before a committee of the House of Commons, said "I have read every definition which I could meet with and never was satisfied with any of them, and have endeavored to make one satisfactory to myself. I verily believe that it is not in human power to do it." The same opinion is held by Drs. Bucknill and Hack Tuke in their Manual of Psychological Medicine.

Taking the ground that delusions which prove the insanity of one man do not necessarily demonstrate insanity upon the part of another, I venture to assert that the notorious hypothetical question, which generally consists of a speech with a note of interrogation at the end of it, and which is so much in evidence in law courts when will cases and murder cases are on trial, is absolutely valueless—and often ridiculous. Nor is this all. I contend that delusions *alone* do not prove insanity; and that contention is supported by the

opinion of Dr. Clouston—an alienist of quite the first rank. The following excerpt is taken from the article upon "Insanity" in *Chamber's Encyclopedia*, but the same facts may be found in Dr. Clouston's *Clinical Lectures on Mental Disease*.

"There is no exact line of demarcation between insanity and sanity any more than there is between light and darkness. There is an undefined borderland through which most cases of insanity pass, between technical and legal sanity and insanity. . . . There is or can be no absolute test of insanity—or of sanity, for that matter. Sanity is best proved by normal self-control, and insanity by the loss of it from disease. The presence of one or more insane delusions was at one time the legal test, but it is not a true or scientific one. The "knowledge of right and wrong" was at one time a legal test of responsibility, in other words, of insanity, by the law, but it has long been given up. Half the lunatics know right from wrong in some degree or other."

Dr. Austin Flint made what I believe was his *début* as an alienist in a law court early this year in the Brush will contest. On cross-examination, the following questions and answers were in evidence:

"Do you believe that if a person was run over by a street car and had a limb cut off, and was bleeding to death, that that person could live if he or she refused the attendance of a surgeon?"

"Oh, no."

"Would such belief be an insane delusion?"

"Not if the person could be convinced that it was necessary to have a surgeon."

Had Dr. Flint made himself familiar with any important work upon mental pathology, he would have learned that "delusion" means a steadfast belief in some untrue idea which, as a rule, personally concerns the victim, and of the falsity of which he cannot be persuaded by any amount of evidence, demonstration, the experience of his own senses, or the declaration of others. The word "delusion" is not applicable to a fallacy which can be dispelled by argument. Dr. Flint's so-called "expert testimony" induced Dr. D. A. Gorton to write a long letter to the *New York Times* and to the *Medical Times*, the object of which was to persuade his readers that the "distinction between persons subject to delusions is that the sane person is amenable to reason and can be argued out of his delusions; the insane person is one in whom delusions are fixed, and who cannot be persuaded of their irrational or delusional character." Apparently Dr. Gorton has forgotten that we have such words as "illusion" and "hallucination." The distinction between these terms is well explained in the *Century Dictionary* under "delusion"; and this word will have lost its value if it is to be used synonymously with any other word. The amateur alienist, even when eminent in some medical specialty outside of psychiatry, always demonstrates the accuracy as the proverb that "a little knowledge is a dangerous thing."

Some Christian Science "healers" are, I feel

sure, very sane—and very shrewd—money-makers. Many of their dupes are merely extremely ignorant persons who are easily imposed upon, for, while everybody boasts of the "excellence" of American education, that "excellence," as it is humorously called, only means ability to read and write. Ability to spell is rapidly going out of fashion, and many school teachers still belong to the "I done" and "he seen" variety.

Of the "scientists" with whom I have talked, some are clearly on the borderland of insanity, and none can be properly described as "educated" in the correct sense of the term; but perhaps my definition of this word might not meet with universal approval. However this may be, the following paragraphs telegraphed to the *New York World* by Mrs. Eddy on February 22d, and published in the *Christian Science Sentinel* of February 28th, are well worthy of reproduction.

"The supposition that we can correct insanity by the use of drugs is in itself a species of insanity. A drug cannot of itself go to the brain or affect cerebral conditions in any manner whatever. Drugs cannot remove inflammation, restore disordered functions, nor destroy disease without the aid of mind.

"Neither life nor death, health nor disease, can be produced on a corpse whence mind has departed. This self-evident fact is proof that mind is the cause of all effect made manifest through so-called matter. The general craze is that matter masters mind; the specific insanity is that brain, matter, is insane."

Comment would be out of place.

This same Mrs. Eddy has written a *Key* to the Scriptures, and almost everybody will gladly admit the value of a genuine "key," especially to the New Testament. Perhaps I may be permitted to say that I have found Huxley's *Science and Christian Tradition*, aided by my knowledge of Greek, an extremely valuable "key"; but the great naturalist's work would not be understood by any resident in the outskirts of Bedlam. While all Bible students whose intellects are normal would appreciate a "key" written by the possessor of a high-class education, they must necessarily look with disgust upon any such work produced by a tyro. That the woman Eddy is grossly ignorant is proved beyond peradventure by the following excerpt from *Christian Science versus Pantheism*, a pamphlet of which the high priest of the latest form of quackery is the reputed author: "*Pan* is a Greek prefix, but it might stand, in the term Pantheism, for the mythological deity of that name."

A Pan-American Exhibition is now being held in this city of Buffalo. If Christian Scientists really believe that the word "Pantheism" is in some way connected with the god Pan, they may also suppose that the exhibition in question is a tribute to this same god. If there are "scientists" who take this view, I hope they will not be deterred by it from visiting the exhibition, for one day there would do much toward educating anybody—even an Eddyite.

The medical profession is united in the belief that the Koch bacillus only attacks those who have either inherited or acquired a special susceptibility towards tuberculosis, due, in all probability, to a lowered vitality of the tissues. Similarly, epidemic insanity only attacks those individuals who have inherited or have acquired the insane predisposition; and just as prophylactic measures, such as a highly albuminous diet, may aid the possessor of the phthisical diathesis in resisting the inroads of tubercle bacilli, so may suitable educational methods assist the individual who has inherited or has acquired a tendency towards insanity in maintaining a moderately sound brain. But it must be admitted that the necessary educational measures are generally objectionable to the sufferer, and are not forced upon him without serious difficulty. Men and women whose minds are neuropsychopathic are prone to seek the society of others having similar peculiarities, with whom they have a sympathy of feelings and thoughts. Wild flights of imagination and empty idealistic aspirations, such as they themselves indulge in, excite their admiration, while sober reflection and hard work are repugnant to them. The best tonic for those unfortunates who are predisposed to insanity is the investigation of the laws of Nature; and if our boys and girls can be induced to study natural science and to cultivate whatever powers of observation they possess, the mental epidemics of the future will be few, for the disease will not have a fertile soil upon which to propagate. I have little hope, however, that this prophylactic will be utilized to any great extent, because I have good ground for believing that the zoölogy and botany of the average high school are of the pre-Darwinian type, and the mere classification of animals and plants neither appeals to the reasoning powers nor satisfies legitimate curiosity.

Foolish as extravagances of the character of Eddyism unquestionably are, they should be treated with a certain amount of indulgence, for they are often the least harmful direction which the insane diathesis can take. If it were not for them, many persons who are now upon the borderland of insanity would be actual lunatics. An absurdity like Christian Science is really "a sort of masked madness" (Maudsley)—it is the safety-valve which saves numbers of sufferers from the asylum.

344 Hudson street.

A NASAL CONDITION AFFECTING THE OCULAR MUSCLES.*

BY HEBER NELSON HOOPLE, M.D.,

OF NEW YORK, BOROUGH OF BROOKLYN;
SURGEON, EYE DEPARTMENT, WILLIAMSBURG HOSPITAL; CLINICAL
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THE thesis I wish to advance is that faulty pressure within the nose can cause asthenopia of both the ciliary and external ocular muscles. To be more specific, I wish to show that mere me-

chanical pressure in a limited area of the nose, called by Mackenzie¹ the reflex area, can cause muscular asthenopia. By muscular asthenopia I mean impairment of the efficiency of the ocular muscles in the performance of their ordinary function.

The faulty pressure to which I refer is confined chiefly to the middle turbinate, but it may extend to the ethmoid cells, especially in cases of great hypertrophy of the middle turbinate. But I wish especially to point out that, without hypertrophy, where the middle turbinate is tightly compressed against the septum, or the septum is deflected against the middle turbinate, or a spur from the septum digs into the middle turbinate, or the middle turbinate is crowded by a deflected septum against the ethmoid cells, in all these instances we may have, and are almost certain to have sooner or later, muscular asthenopia.

As a corollary to this claim, I would say that all cases, wherein muscular asthenopia is present as a result of the conditions just now enumerated, are equally likely to give the history of nasal headache, hemicrania, or migraine. As the pressure is not absolutely certain to produce the muscular disturbance, so it is not absolutely certain to cause the headaches; but, in about the same ratio as the one form of disturbance is produced, will the other also be brought about. It is not a part of my thesis to demonstrate the corollary; but, as the corollary is of great value to me, I wish to make use of it, and, fortunately for me, it has already been demonstrated.

Glasgow², Allen³, Roe⁴, Woolen⁵, Pyncheon⁶, Loeb⁷, Snow and others^{8,9}, who have investigated this offence of the middle turbinate, have made it evident by adequate inductive proof that the pressure and the headaches are correlates. They removed the pressure and, presto! the headaches disappeared—*sublata causa tollitur effectus*.

Patients suffering from such headaches seek the oculist in search of eye defects to account for them; they do not seek the rhinologist, because they have no symptoms pointing to a causative condition in the nose. It is in the study of just this class of cases that I have found the more or less constant presence of muscular asthenopia.

To prove my thesis one-half of the evidence is already in. I shall briefly summarize this before proceeding with other witnesses. The half that I refer to concerns the ciliary muscle; and as to this the following observers have reported, namely, Maxwell¹⁰, Clark¹¹, Cheatham¹², Bettmann¹³, Hamilton¹⁴, Gradle¹⁵, Wood¹⁶, Berger¹⁷, Ziem¹⁸, and Niden¹⁹. They have all found cases of asthenopia whose cause was some form of local irritation in the nose on removal of which the asthenopia disappeared. Coincidence is not proof, but it is evidence. The evidence is cumulative. It has its value in support of my thesis so far as the local cause had its location in the specified area—the irritable or reflex area of the nose.

There is other evidence of the same character that is still more available for my purpose, be-

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cause it inculcates the external ocular muscles as well as the ciliary. It is furnished by De Schweinitz¹⁸, Ziem¹⁹, and Berger and Trymann²⁰.

In regard to the first group of witnesses, I will especially consider Maxwell's cases, some of whom were treated for nasal troubles as well as for asthenopia. It was noted that their asthenopia disappeared as soon as the nasal trouble was cured; and then the patients of their own accord threw aside their glasses without inconvenience. This would probably happen oftener in Maxwell's practice than it could in America. He very likely had to deal with but one kind of asthenopia, called by Gradle *normal asthenopia*, to distinguish it from another type which he called *excessive*. The former could tolerate without discomfort a small error of refraction. Seabrook²¹, recognizing the same distinction, has employed for the second class of Gradle the well-chosen term *neurasthenopia*.

I purpose to avoid this second class and to present histories herewith of those alone that I regard as conforming to the normal type.

Cases II. and IV. are given in the MEDICAL NEWS for April 13, 1901. Cases V. to VIII. are as follows:

Case V.—E.—E—, fifteen years old, school-girl; medium height, broad frame, plump, fat and heavy, well developed and well nourished. Rides a wheel. Appetite good. Menses regular; normal type. Yet she has frequent browaches, brought on by constant use of the eyes in study. Occipital headaches occasional, used to be more frequent. Some intolerance of light and excess of lacrimation on steady use of the eyes.

V. o. u. = $\frac{10}{10}$. Javal .50 c. a. 90°, with the rule

p. a. Ex. 4°, Ab 26°, Ad 31°. p. p. of Acc., o. d. 12 cm., o. s. 11 cm.

p. r. Es. 3°, Ab 4½°, Ad 17°. p. p. of Conv. 10 cm.

The left middle turbinate is tightly compressed against the septum. Instituted cold sponge baths every morning on rising. After two weeks at

p. a. Ex. 4°, Ab 10°, Ad 36°. p. p. of Acc. 10 cm.

p. r. Es. ½°, Ab 6°, Ad 18°. p. p. of Conv. 5 cm.

Divulsed the left middle turbinate vigorously and the right lightly and then tested again.

At p. a. Es. 6°, Ab 15°, Ad 29°. p. p. of Acc. o. d. 14 cm., o. s. 16 cm.

p. r. Es. ½°, Ab 6½°, Ad 13°. p. p. of Conv. 7 cm.

Two days later the patient reports having slept soundly without the usual restlessness and tossing. She has had no headaches since the divulsion, though she has used her eyes constantly; there is no photophobia, nor excess of lacrimation.

At p. a. Eq., Ab 14°, Ad 41°. p. p. of Acc., o. u., 10 cm.

p. r. Es. 2°, Ab 6°, Ad 18°. p. p. of Conv. 7 cm.

This case is given solely to show the effect on

the muscles, first, of the faulty compression, second, of the mechanical disturbance, third, of rest for forty-eight hours after the latter.

Case VI.—G.—P—, well-developed school-girl of fifteen years; 5 ft. 6 inches in height, weighs 120 pounds. Good appetite. Good general health. Menses regular. Sleeps enough and is rested by it; nevertheless, for the last three years she has been restless and has tossed in her sleep a good deal. This has been more marked during the last six months. She complains of blurring in reading, of twitching of the left eyelids and of headaches after prolonged study or writing.

V. o. u. = $\frac{9}{10}$. Javal o. d. 1.50 c. a. 90°, o. s. 1.00 c. a. 90°, with the rule. Exophoria ½°, Ab 5½°, Ad 15°. No hyperphoria. Acc. weak. Ordered +.50 c. a. 90°, o. u. to be worn till vacation. They were worn but vision was not clear with them, though better than without them.

Three and one-half months later, examined her eyes again under atropine. V. o. u. = $\frac{2}{10}$. Javal o. d. 1.50 c. a. 90°, o. s. 1.00 c. a. 90°. Found also H. o. u. 1.00 D.

Ordered, o. d. +.25 s. + 1.00 c. a. 90°.

o. s. +.25 s. + .50 c. a. 90°.

Three months later she reported relief of all the symptoms for which the glasses were given. Eleven months after her first visit she had a slight attack of grip. Six weeks later she came again with symptoms which she had had for more than a week. The left eye was heavy; the lid drooped; the left eye and brow ached; she felt as if she must keep that eye shut; both eyes were intolerant of light. Occipital pain occasionally. Tests with and without her correction both gave the same findings: Ex. ½°, Ab 6°, Ad 19°. At p. a.; Ex. 18°.

The right middle turbinate touched the septum superiorly; the left was closely compressed against the septum throughout its entire surface. The patient has had a cough both this winter and last—a dry, hacking, ineffectual cough. The letters dance before her eyes in reading and her eyes are worse than they were a year ago when she first consulted me.

Two weeks later: She now complains of severe occipital pains. Cannot read longer than twenty minutes without troublesome dancing of the letters. Soon thereafter headaches set in.

In acc. at 10°, Ex. 18°, Ab 30°, Ad 30°.

At 20°, Ex. ½°, Ab 6½°, Ad 10°.

Owing to the narrowness and compressed character of the left naris, the left middle turbinate was removed as a whole.

Two days later: Her eyelids do not droop, although she continues to have pain over the left eye and in the occiput. But there is no blurring with her glasses, although the p. p. of Acc., o. d. is 25 cm., and o. s. 22 cm. Her p. p. of conv., however, is 5 cm.

In Acc., Ex. 18°, Ab 20°, Ad 28°.

At 20°, Eq., Ab 6½°, Ad 16°.

Eleven days later. She accommodates for No. I. J. at 12 cm. Ex. 6° to 20°, Ab 28°, Ad 23°.

At 20', Ex. $\frac{1}{2}^\circ$, Ab 7° , Ad 17° . Rel. Acc. Neg. 4 D. Pos. 2.5° .

No further headache, blurring, nor intolerance of light. Holds both eyes wide open. Sleeps better. Has no more backache, as she had before at times.

One month later: She now complains that although the eyes have felt all right, yet each night on going to bed she has a face-ache on the left side. I find a remnant of the tubinate left in, closely pressed against the septum, and remove it.

Two weeks later: Patient now reports that she has been free from the face-ache ever since last piece was removed. No other symptoms.

p. a. Ex. 6° - 16° , Ab 30° , Ad 46° . p. p. of Acc. 10 cm., o. u.

p. r. Eq., Ab $8\frac{1}{2}^\circ$, Ad 35° . p. p. of Conv. 6 cm.

With the aid of the weighted convergence stimulus she carries 42° of adductive prisms to 20' and raises it to 65° .

The salient points in this case are these: The patient is a strong, healthy girl; has had restless sleep for three years; has symptoms of accommodative asthenopia and occipital headaches. There is exophoria; there is also weak abduction and weak convergence. She is given her correction for hyperopic astigmatism which she wears for nine months and then has the grip. Three months after that the left middle tubinate is removed and a month later a pressing remnant of the same. Since then all her symptoms are gone. She has now restful sleep. She reads continuously without discomfort. Her cough is gone. Accommodation and convergence are now good. The muscles all give strong tests and good balance except at the near point, where there is merely a lessened exophoria. The touching right turbinate is left severely alone, because there are no symptoms.

Case VII.—Miss M—C—D—, twenty-three years of age. In good health. Puts on flesh and maintains good nutrition. She is wretched with very severe headaches, throbbing at times, which are becoming more severe and frequent. She has had them for many years. They extend from the right side of her forehead to the temple, vertex and occiput. Sleep often relieves them; but sometimes she cannot sleep on account of them, they disturb her whole night and she rises with them the next morning. Her menses are regular, but painful. Her eyes burn. She has conjunctivitis. She has had styes. There is no special tenderness of the trochlear or supra-orbital nerves. $V = \frac{10}{10}$ with each eye. There is the merest trace of vertical astigmatism. She has Hm. + .50s. Ophthalmoscope measures $\times 1.50s$, o. u. She reads No. I. J. comfortably with or without +.75s.

At p. a. Ex. 9° . At 20', Ex. 2° , Ab $4\frac{1}{2}^\circ$, Ad 12° .

Her left nostril is normal. Her right has a long shelf on the septum almost occluding the inferior meatus and the right middle turbinal is tightly compressed against the septum.

On February 21, 1901, this nostril was relieved of its ecchondrosis and its offending middle turbinal. The extent of surface disturbed caused tedious recovery. But, exactly one month later this patient reported that she had slept so soundly she had not heard the breakfast bell, a most unheard of occurrence with her. She has had no headaches. Menstruation occurred in the interim and was painless for the first time.

April 23, 1901. At p. a. Ex. 4° , Ab 23° , Ad 41° . At 20', Es. $\frac{1}{2}^\circ$, Ab 5° , Ad 65° . p. p. of Acc. o. d. 9 cm., o. s. 8 cm. p. p. of conv. 7 cm.

A new experience with her is to be able to shop all day long without a headache. She is an inveterate reader and has been reading many books during this last month without any discomfort. I have given her no glasses for her hyperopia; she does not seem to need them. If she were to have her correction, doubtless her eye-muscles would give even a better account of themselves. But, *cui bono?* She is perfectly comfortable as she is. This case has an argument in it for those who say that ametropia is the sole cause of asthenopia.

Case VIII.—Miss E—M—, twenty-seven years of age. Stenographer. Woman of solid build and sturdy endurance. Likes work and does not tire at it. She has been wearing for two years, o. u. + .75 c. a. 90° , given her on account of pain in the eyes recurring daily.

Present symptoms: Headaches frequent for the last six months, occasionally very severe, extending along the right side of the head to the occiput. She has noticed blurring in her right eye, especially at the onset of her headaches, which are severe enough to drive her home from her work.

V. o. u. = $\frac{10}{10}$. Javal 1.00 @ 90° . Media clear. Fundus normal. In Acc. Ex. 8° , Ab 30° , Ad 20° . p. p. of Conv. 12 cm.

At p. r. Ex. $\frac{1}{2}^\circ$, Ab $4\frac{1}{2}^\circ$, Ad 15° . No hyperphoria.

Right middle turbinate closely compressed against the septum; left middle turbinate touches the septum more lightly. Divulsed both middle turbinates. After a month and a half with frequent tests in the interim, the following findings were obtained, associated with return of slight blurring in right eye, though headaches had been banished together with an irresistible desire to close the eyes in church.

In Acc. Ex. 6° , Ab 25° , Ad 16° . p. p. of Acc. o. d. 13 cm., o. s. 10 cm.

At 20' Es. $\frac{1}{2}^\circ$, Ab $6\frac{1}{2}^\circ$, Ad 31° . p. p. of Conv. 12 cm.

I found the right middle turbinate still no better for the attempt at divulsion and felt compelled to remove it, as the blurring continued and the patient was unwilling to let the treatment go at that, if the condition could be bettered. This turbinate was removed after which there was some nausea and pain in the right eye for forty-eight hours. Blurring and photophobia to some extent continued in the right eye for ten days, after which her tests were as follows:

At p. a. Es. 2°, Ab 26°, Ad 31°. p. p. of Acc. o. u. 10 cm.

At p. r. Es. 7°, Ab 6°, Ad 8°.

Improvement kept up daily. Blurring went away. In two weeks,

At p. a. Ex. 5°, Ab 24°, Ad 25°. p. p. of Acc. o. d. 10 cm. o. s. 9 cm.

At p. r. Es. 1°, Ab 6°, Ad 34°. p. p. of Convge 11 cm.

Histories of cases belonging to the neurasthenic class also show improvement following proper attention to the same faulty condition. In these cases, however, I am loth to interfere radically; and I do so only upon the urgency of the patient's need of relief of most distressing symptoms, *i. e.*, when the asthenopia and headaches are both extreme.

When the removal of the whole of the middle turbinate is thought necessary, it is approached with great hesitation and circumspection. It is no light matter to deprive the nose of so important a functionary. Delevan²² has pointed out a most scientific reason for its partial or complete removal. He found, by examination of the Hyett collection of skulls in the College of Physicians of Philadelphia, "in nearly every instance in which hypertrophy was observed it was confined to the middle turbinate bone of the wider naris." Operation for deflection would fail of its object without first removing a part, or the whole, of this hypertrophied body. After this, and not before, he would straighten the septum, and in this he is supported by Zuckerkandl.²³ I am able to add another reason to those which he has given. I have found in such a case that the hypertrophied middle turbinate was the cause of a concomitant asthenopia which was sufficient of itself to call for its reduction or removal, before returning the septum to its normal place. But, where conservative surgery can save the body of the turbinate, it should be saved. Pyncheon's guarded trephine is useful to this end.

In the study of these and of other cases not yet reported I believe I have grounds for making the following postulate: A moderate amount of pressure or mechanical irritation of the middle turbinate and adjacent septum will temporarily impair the function of the ciliary muscle. To a less, or more variable, extent it will also impair that of the external ocular muscles. I have repeated this observation many times when giving to patients that mechanical treatment necessary to relieve such pressure. Now, if mechanical irritation for a brief period can impair the function of these muscles, how much more would a continuous pressure irritation of that same area keep up that impairment! It is such continuous pressure that is produced by a spur, or bend in the septum when it digs into a too-closely-applied middle turbinate.

I do not look upon the headaches in these cases as in any way a symptom of the asthenopia; they are but frequent associates, yet, they are often inseparable. The reason for this must be evident. They have a common cause, pressure on

the same sensori-motor branches of the fifth nerve. So far as the sensory part is affected a radiated or a reflex headache is produced; so far as the sympathetic fibers are affected a vasomotor reflex is produced. This is equally true where there are inflammatory conditions, as in ethmoiditis. It matters little whether the pressure is from *within* the ethmoid cells and turbinate, or is applied to these from *without*. The important point is that the same branches of these nerves are the nerve elements pressed upon and therefore the same kind of disturbances should be expected to follow.

Not pain, but *tire* is the expression of sustained and exhaustive effort by weak or inharmoniously acting muscles. If pain ensues, it is secondary and not the direct result of effort. The only part which vasomotor nerves can take in producing pain is to increase the blood-supply to a sensitive area and thus increase its susceptibility. The asthenopic disturbance is probably from the sympathetic fibers in this particular class of cases. That it is such in all cases is also probable. It could properly be inferred from other facts, as, *e. g.*, when treatment addressed to the uterus, the bladder, or the stomach in other cases, has given relief of the asthenopic symptoms. The only thing conceivable as being common to all these varied causes is the element of the sympathetic nerves. In conclusion, I have only this to say by way of harmonizing the various facts, practices and theories, that I expect to see the time arrive when muscular asthenopia will be recognized as but a symptom of disturbance of a part of the sympathetic nervous system.

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CRIMINALS AND DEFECTIVES: HOW BEST TO REDUCE THEIR NUMBERS.

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UPON the solution of this problem rests the welfare of home, nation and civilization. The proper study of mankind is man. At the dawn of the new century the United States finds itself confronted with an alarming increase of crime. During the past fifteen years the population of the

United States has increased 25 per cent., but during the same period crime has increased 60 per cent. During this period crime has markedly decreased in the British Dominions in proportion to the population. This increase in our criminals and defectives is a sore spot in our political and social system. No one can afford to ignore this subject. It concerns every taxpayer, and every one who makes his own living is a taxpayer, whether he owns real estate or not. The politicians and ward-healers have virtually had charge of the criminals and defectives. It is time the physician should be called in to diagnose the disease, and proclaim to the world that crime and defectiveness are due to neglected education, heredity and disease. The wardens of penitentiaries and executive officers of reformatories should be physicians. The law as administered at present is intended for normal beings and not the criminal, who is an abnormal being. Careful and scientific treatment must be substituted for a political sport's system of management. Laws should be directed toward the criminal and not the crime. The basic causes of crime must be attacked. The remedy consists of prevention, reformation and education.

It is wise for a growing nation, like a growing boy, to consult a physician with regard to its health. The physician will prescribe and direct the following: Intelligence is the lever capable of raising mankind. Through it, we begin the conquest of ignorance, poverty and crime. The preacher, priest and hangman have failed to stay the rising tide of vice and crime. Ignorance, poverty and vice must stop populating the world. To this end woman must be taught to become mistress of herself and decide for herself whether she will or will not become a mother. Then the babes that are born will be welcome. They will fill homes with light and joy. People unable to support themselves fill the tenements, the huts, and the hovels with children. They depend on the Lord, on luck and on charity.

According to vital statistics it takes on an average about $3\frac{1}{2}$ children to each couple to propagate their kind. Too many people are heedless of all Biblical commands except to "multiply and replenish the earth." More children have been borne to poor people than they can rear properly, whereas parents of education and means rarely have more than two children. If they have a third child, it is a mistake. This disparity is a cause of the lack of growth of the population at the top and of an excessive growth of the population at the bottom.

The man-made laws have accorded the male sex dominion over the female, which has placed millions of girls and women at a disadvantage in the struggle for bread, and which compels thousands of them yearly to accept degradation or starvation. The slur that is becoming affixed to "stenographer and typewriter" is familiar to many. One lady while seeking a position as a stenographer and typewriter was asked so often by those seeking her services, if she would be

"accommodating" that she gave up the business for that of a trained nurse. *The Arena* for January, 1898, gives the following figures for Massachusetts, New York and Illinois: 16 per cent. of married men desert their first wives after the birth of their first child, and 28 per cent. after the birth of their second child. Women have opened their eyes to this condition, and as a result 18 per cent. of women of marriageable age in the United States have equipped themselves for earning a living independent of man. Thus, she was forced to take his position in manufacturing, mercantile, professional and other pursuits. The failure of husbands to provide for their wives cost them their jobs in many cases. The helpless slavery of woman with the attendant evils of enforced motherhood must be relegated to the rear as a crumbling relic of barbaric injustice.

If the father is the head and hands of the family, the mother is the heart.

Schools in Relation to Crime.—The intelligent taxpayers are compelled to take cognizance of the school question and the criminal problem in self-defence. It is more economical for taxpayers to support the kindergarten and the industrial schools, and thus teach the rising generation how to be self-supporting, than it is for them to maintain a great army of criminals and defectives. Many people go to prison because they have never learned how to earn an honest living. Manual training in our schools should be multiplied, skilled workmen of good character need not go long looking for work. It is the unskilled pretenders of questionable character that compose the swarming job-hunters. The men and women that come to the Friendly Inn expressing a willingness to do any kind of work, do their work so poorly and slovenly that in most cases it is economy to let them sit idle rather than allow them to spoil material. It is found that the higher the character of the daily pursuits in life the greater the unlikelihood of falling into crime. Criminals as a rule are only accustomed to the crudest forms of labor.

There is a false notion that university degrees for women will impair their usefulness as housekeepers or wives. The fact is university degrees to-day would be more useful to the nation among mothers than among female teachers. The female college graduates need not apologize to the world for their interest in learning. The better education a woman has the better she is fitted for motherhood. Both men and women in the household are governed by their hearts and not their heads. A man with a university degree does not neglect his children. College training does not unfit a woman for domestic duties. John Wesley's mother had a college training. She directed the education of her family, which reflected great honor upon her. The mother who can teach her children and direct their reading will command higher respect and love from them than the mother who is ignorant, however amiable. Let us give more instruction in cooking and

domestic economy, dignify this kind of knowledge and graduate good housewives rather than novel-readers, house-ornaments and factory-girls. Today women who abhor cooking, mopping and general housework can be found in swarming myriads. Many women fitted by Nature to bring up children have their lives blighted by grappling with the dead languages or biology. The only valuable education is that which enables a person to make his or her way in the world.

Financial Standing.—This takes too high a rank over virtue and morality. It dominates the marts of trade and dictates the courtesies of the street, formulates the laws of fashion and times the chime of the marriage bells. Its voice is heard in the music of the choir and on the cushion of the pew. Everywhere the dollar sign is traced in threads of gold. Even the church and its moral forces falter to stem the tide and cringingly bow to the overmastering powers of wealth. We are all under the ban and have our shortcomings. It is said that if the least of the sins of the best of us were written across our foreheads, we would walk the streets with our hats pulled down.

Division of the Vicious Circle and the Saloon in Relation to Crime.—Eighty per cent. of drunkenness is due to heredity; alcohol causes 33 per cent. of all diseases, 75 per cent. of the crimes, and 50 per cent. of the poverty that afflict our race. Intemperance of parents causes 34 per cent. of the imbecility in children. The general causes of insanity are: heredity, 50 to 60 per cent.; whiskey, 12 per cent.; religious perversion, 10 per cent.; disappointment in love, 10 per cent.; financial embarrassment, 5 per cent. Crime, imbecility and insanity are due in 50 to 75 per cent. of cases to heredity; 50 per cent. of criminals are inebriates; 20 to 25 per cent. of criminals are born criminals. Three-fourths of the crime in our land is caused by neglecting education. Three-fourths of the crimes are committed by habitual criminals. Only 10 per cent. of the criminal offenses are detected and punished.

During the past year the corn crop in the United States was valued at seven hundred and fifty million dollars; cotton, three hundred and fifty million; wheat, three hundred and twenty-five million; oats, two hundred million; potatoes, one hundred million dollars. The amount paid last year for liquor consumed in the United States was one billion, one hundred and seventy million dollars, or an amount greater than the corn, cotton and wheat crop of the whole country. The only items that rose higher in value were the exports in general merchandise, \$1,400,000,000, and income from railway service, \$1,200,000,000 (Official Revenue Report).

It is found that 31 gallons of beer contains the same nourishment as one loaf of bread. The saloon is the home and resort of the criminal. It is the place where he spends the money obtained by crime. It is the place where he meditates on crime. Dram-drinking is not an offense against property. The drinker pays his money

and takes his drink. If he is violating the laws of the land there is no one to complain. The offense is against society as a whole. In the case of housebreaking or theft there is no difficulty in finding the plaintiff, because he is interested in recovering damages or goods. The saloon is such a powerful factor in our political system that it seems to be impossible to get legislators to enact laws to regulate this great traffic. The saloons should be owned and run by the government. This would eliminate private gain. They should be run on the same plan as the post office.

Characteristics of Criminals.—The physical and moral characteristics of criminals are not so valuable in convicting them of crime as in classification and treatment. A person may have insane ancestry and be inevitably doomed to insanity; yet his liberty cannot be abridged without some warrant from his action or words. Also, a person may have many of the essential characteristics of a criminal, and through favorable environment he may pass through life as an upright citizen. The characteristics that are of interest and value are as follows:

The great bulk of criminal heads are of average size, but small and large heads predominate. Thieves more frequently have small heads and murderers large ones. While there is a lack of symmetry in nearly all heads, this is one of the most constant features of criminal skulls. The weight of the brain is not of importance. The shape and relative development are of more value. In criminals the weight of the cerebrum is above the normal average. Confluent fissures are found in the brains of criminals and idiots with more than ordinary frequency (Benedict). There are fewer convolutions in the brains of most criminals than in ordinary brains (Flesch). Meningitis has been found in 50 per cent. of criminals (Lombroso). The writer made autopsies on 50 insane criminals and in 29 cases found meningitis and more or less atrophy of the brain. In one case a colored patient, who was committed to the penitentiary for murder, refused to eat and was transferred to the Insane Asylum at Topeka, Kas., where he died six months later. An autopsy revealed meningitis and complete occlusion of the superior longitudinal sinus with inflammatory products. A patient whose case was in the courts of Atchison, Kan., for two years for the alleged crime of rape was finally acquitted of the crime, but was adjudged insane and sent to the asylum. When he died an autopsy revealed meningitis and atrophy of the upper part of both hemispheres of the brain.

From an examination of a large part of cases and autopsies on a considerable number, the writer is convinced that a large number of patients are erroneously sent to the State prison instead of to a hospital for the insane. Heart disease is found in 20 per cent. of criminals. Syphilis causes gummatous tumors in the brain and otherwise impairs the mental function and thus causes crime. Tuberculosis, owing to toxins circulating in the brain leads to crime. High

cheek-bones go with strong animal passions. Criminals usually have the lower jaw unusually developed. The ears are outstanding, the nose is crooked and has a poor bony framework. The skin is dark and pale; wrinkles appear prematurely about the mouth and nose and not in the forehead, as in profound thinkers. The assassin has animal eyes, usually eyes like a cat's eyes. Criminals are frequently left-handed, have tendon reflexes absent or exaggerated, great acuteness of vision, but defects in hearing, taste and smell. In them wounds heal rapidly, as in the crude races, such as the Egyptians and the Chinese. Criminals are usually flatfooted and below the average height and weight, and have deficient muscular development. Beautiful faces are rarely found among criminals. They are incapable of blushing. Thieves usually have great mobility of their features and hands. Their eyes are dark, small and restless, the eyebrows thick and close, the forehead usually narrow and receding. In the sexual offender the eyes are nearly always bright, the voice rough or cracked. The face is generally delicate, except the jaws, which are usually heavy. The lips and eyelids appear swollen. The homicide usually has a large beaked nose suggestive of a bird of prey and his eyes are glassy, cold and fixed. The sharper and forger, in order to inspire confidence, puts on an angelic face and a clerical appearance. In criminals, as a rule, the beard is scanty, the hair dark, abundant, long, and often wooly; baldness and gray hair are rare among them, but frequent among the insane, the business and professional man. Gray hair appears early in criminal women. Women guilty of infanticide usually have an excess of hair on the face. Eleven per cent. of idiots have continuous eyebrows. Among criminals dark hair predominates, except as regards sexual offenders, in whom fair hair abounds and the prevailing color is reddish. Red hair is infrequent among born criminals, but abundant among the insane and sexual offenders. Fair and red-haired persons are susceptible to fevers and zymotic diseases. The brightly pigmented persons with sensitive vascular system will soon be eliminated from the criminal calendar.

The crimes of women are generally due to emotional causes; as love, jealousy, hate, revenge, vanity, etc., because woman's emotional nature has been more highly developed. Women persist in crime more than men, because of the greater social ostracism of degraded women. Women endure pain and privation better than men, and therefore do not take to crime from want so readily as men. Women are more cruel than men, but criminal women are usually masculine. Females, being physically weaker than males, are addicted to crime only one-fifth as frequently and only excel the males in the commission of poisoning and infanticide. Woman's natural form of retrogression is prostitution. This is why there are no female tramps.

Even children readily form likes and dislikes for persons they meet. They have an intuitive

knowledge of strangers. In the child, up to a certain age, are manifested the saddest tendencies of the criminal. Even infants at the age of two to twelve months manifest anger and rage and will strike at nurses and break dishes (Lombroso). Stanley Hall says all children are liars. The Psalmist, said in his haste, that all men are liars, and were he living to-day he could say this with deliberation. Children are too often induced by fraud and ruse to do things they dislike. Thus lessons in deception are learned. The child may prefer wrong to right, because the true moral sense is wanting. Many never pass from this to the higher plane. National education should be empowered to classify children according to their moral sense as well as their intellect. One corrupt pupil may infect the whole school. Those feeble in morals and intellect should have extra guidance and instruction. The idea of goodness should be held up, rather than that of badness. The way to destroy evil is not to hold up and analyze it in order to make it hateful, but rather to let it pass out of consciousness.

The subject of criminology has in store rich rewards for its students. Our knowledge of the subject to-day is but as droppings before the shower. The law of disease is as beautiful as the law of life. In the law of disease the line of progression is reversed. The born criminal is a moral monstrosity cast upon the shores of the present by the receding waves of barbarism. Savages drink blood before engaging in conflict. Many dwellers in civilization to-day become engaged in law-breaking and conflict after drinking whiskey. Mobs are incited to frenzy at the flow of blood and crowds catch the infection.

Crime occurs in epidemics under the inspiration of examples suggested and published in the newspapers, especially if the perpetrators escape detection.

The born criminal invariably has physical signs of degeneracy. They are akin to the victims of moral insanity. He is usually free from small vices, and often possesses considerable intellectual ability. He asserts that he cannot afford to drink for fear of impairing his skill in his craft. His language is slangy. He plots against the rich, he is always against the government, and he is unpatriotic. He may be religious. He lacks curiosity, the fundamental element in progressive education. He is insensible to pain, which is the cause of his cruelty. He can undergo surgical operations without an anesthetic. He lacks remorse. This is a sure sign of incurability. His lack of remorse and conscience accounts for the apparent sincerity with which guilt is denied and the equanimity with which he meets his doom. He is lacking in foresight and in the imaginative faculty, consequently no warning signals light for him the pathway of hidden danger. This is why he faces futurity with unconcern. Where this faculty is highly developed, it makes cowards of us all. The born criminal is notoriously untruthful, incapable of blushing, full of vanity and often exaggerates his crimes on this account.

Holmes confessed to crimes of which he was not guilty. The criminal by passion has no criminal characteristics and shows remorse for wrong-doing. He does not commit crimes against property. He is not a permanent enemy to society. He is simply lacking in self-control and accepts discipline and correction with advantage to himself and all concerned. The criminal from moral cowardice commits a small wrong, and, being lacking in sufficient moral courage to face the world and live it down, commits a greater crime in order to cover it up. Frantz of Dayton, Ohio, the slayer of Bessie Little, and Jackson and Walling, who beheaded Pearl Bryan, are examples.

Police System.—Frequently the police patrol is seen crashing through the streets at top speed as if life depended upon it; nine times out of ten the noise and crash over the cobble stones fails to arouse the captive from his drunken stupor. No high-grade skill is necessary to capture such victims and no great good is accomplished, except temporary removal of a nuisance. During the past years height, avoirdupois and political pull were the prerequisites for a position on the police force. The police tried to see as little wrong-doing as possible. They closed their eyes to glaring obliquities and the things they were paid to detect and correct. But since civil-service examinations are required great improvements in this system may be expected. I would go still further and fill all vacancies on the police force with high-school graduates or those holding certificates to teach in the county with the addition of requirements of a civil-service examination. This would create a demand for more highly educated people and cause an upward tendency in education. The police should be the guardians of morals of the people, should teach them to obey the law; be the supervisors of the children on the streets. The salaries of policemen range from \$60 to \$80 per month. High-school graduates and male teachers are begging for positions at \$40 and \$50 per month. Patrolling the beat is less confining and more healthful than teaching school. There would be no difficulty in filling the vacancies in the police force by well-educated men of good character.

Our population has 20 per cent. of foreigners in it, but they furnish more than half the inmates of our reformatories, one-third of our convicts and three-fourths of the paupers (F. H. Wine, Eleventh Census). The negro was transplanted on American soil against his will by the whites and kept in slavery 260 years. The negro forms 12 per cent. of the population of the United States, commits 32 per cent. of the crimes; contributes 8 per cent. of the paupers and only 5 per cent. of the lunatics.

Another cause of crime and pauperism is the undue flocking of the urban population to the cities.

The spoils system and political management of our jails and prisons make these institutions high schools of depravity. Then we have homicide for life insurance, which came with the advance

of civilization; also the abuse of cocaine, opium and the other narcotics. The false representations and the false teachings of the tragedies of Shakespeare and other authors help to swell the lists of crimes on the calendar. Disobedience to the laws of Nature and physical hygiene during the present or preceding generations is found to be the main cause of crime, defects and disease. From the cradle to the grave, man is in constant danger from the effects of violated laws.

The Death Penalty.—The death penalty is in force for murder in all the States except Rhode Island, Michigan and Wisconsin. In 1874 capital punishment was abolished in Switzerland, the Cantons were permitted to restore it in 1879, but up to 1890 no Canton had done so. The death penalty was abolished in Holland in 1870, in Italy in 1889, and in Portugal in 1867. Capital punishment for ordinary homicides has been abolished in Russia for over a century, although it is still the punishment for treason. The general testimony is that there has been no increase of murder in those countries since such abolition. Where the penalty for murder is death the prisoner has many more chances to escape conviction than if the sentence is life imprisonment. There is a small percentage of convictions for murder compared with the number arraigned for murder. The death penalty is a crumbling relic of barbarism. It cost the State about \$20,000 to try Durant; \$20,000 to try Jackson and Walling; \$25,000 to try Luetgert; \$20,000 to try Frantz. The cost to the State for trying an alleged murder, if put on interest, would keep a person a whole lifetime in comparative luxury.

Remedy.—It is more economical to put forth every effort to prevent the formation of bad habits in the young than to try to reform confirmed transgressors.

The average length of sentences, including life sentences, is only two years, while the average confinement in insane asylums is four years.

The board of pardons should consist of sentencing judges, the warden of the prison, and one of the chief justices of the State. This board should meet quarterly, hear evidence and correct mistakes of sentence.

The issuing of marriage licenses should be restricted by a national law requiring medical and other certificates to be filed with the Probate Court, showing that the applicants for marriage licenses are free from insanity, criminality and other hereditary taints.

For the cure of the social evil the following prescription is offered: Extension of manual education and industrial schools; improvement in motherhood; stop lease system; extension of reformatory plan; adopt intermediate sentence; improvement in jails; extension of probation system, both for youths and adults, as in Massachusetts; work for prisoners even on short sentences and allowing them a portion of their earnings to be sent to their homes or families. Abolition of spoils system in prison management; higher grade of prison officers; physicians should

be wardens of penitentiary and executive officers of reformatories.

The physician, being armed with the chemical laboratory, the X-rays and other modern means of scientific investigation, will naturally become the mentor of the people, and, as he now protects our shores and municipalities from pestilence and infectious diseases, he will also protect society from crime.

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MEDICAL PROGRESS.

Organic Preparations of Iron.—JOLLES (*Wiener med. Bl.*, June 27, 1901) insists upon a classification of these preparations from a chemical standpoint. It is important to know whether a given preparation is an acid or an alkali-albuminate. In chlorosis and anemia the acid of the gastric juice is diminished. If in these conditions an alkali-albuminate be given, a combination is formed with the slight amount of acid present in the stomach and an increase of digestive disturbance results. On the other hand, acid-albumins containing iron make no hurtful demands on the weakened stomach and reach the intestine unchanged, ready for absorption. Fersan is an acid-albumin containing iron and phosphorus and is a type of the preparations which the author considers to be indicated in anemias.

New Phimosis Operation.—H. S. SCHLOFFER (*Centralbl. f. Chir.*, 1901, No. 26) states that true circumcision deprives the glans penis of its normal covering and later of its normal sensitiveness, and that the dorsal-incision method causes two unsightly and often unmanageable flaps. Phimosis can be cured without going to either extreme of inconvenience and still with entire satisfaction by the method devised by him and successfully employed for over a year. In the marked cases the ring causing the phimosis is cut a very short distance in the mid-dorsal line. After the skin is stretched evenly and firmly backward toward the base of the organ and held in that position, the *outer layer*, consisting of the skin only, is divided in a straight line with the knife obliquely to the right from the mid-dorsal line outward and backward till a point corresponding with the corona glandis is reached. The degree of obliquity of this cut depends entirely upon the degree of the phimo-

sis. In the marked cases the end of this cut may end over the lower quadrant of the organ. Then the skin next the glans is cut toward the left from the midline outward at the point where the first cut began to the same length and amount of obliquity. When the foreskin is retracted gently a rhombus is formed by the two cuts. By placing a tenaculum in each of two diagonally opposite corners and pulling, it may be elongated according to needs and brought to lie transversely over the sulcus. The tension on the underlying connective tissue must be relieved by dividing it down to the tunica albuginea. The opposite long sides of the parallelogram are then sutured each to each, thus adding its length to the circumference of the original opening in the prepuce. When the foreskin is reduced to its normal position one-half the sutures are hidden against the glans and a free, cosmetically pleasing opening is produced and the foreskin is left to ensheath and protect the glans penis and its sensitiveness.

Ligation of the External Carotid.—W. W. KEEN (*Annals of Surg.*, July, 1901) reports two cases of severe hemorrhage, threatening life, one after tonsillotomy and the other after a slight intranasal operation, in which life was saved by ligation of the external carotid after the patients were very much blanched by the loss of blood. In one patient a tonsillotomy wound had continued to ooze rapidly notwithstanding all efforts to check it. In the second patient some apparently insignificant nasal growths had been curetted from the septum, but persistent bleeding was set up which nearly ended the patient's life. The fear which most surgeons have, that the wound which is necessary for the tying of the artery will in its turn be a bleeding area and continue or even aggravate the hemorrhage one is aiming to stop, Keen states is probably groundless. In these patients the artery was found and ligated in a very few moments and the incision closed by primary union without material bleeding at any time. As the hemorrhage at the original operation sites stopped almost at once and was permanently controlled by the procedure, he concludes that the little operation should be performed whenever such accidents occur. The one precaution of the treatment is to be certain that the external and not the internal carotid is tied. The latter unpardonable blunder is always fraught with damage, more or less pronounced and prolonged, to the cerebral substance.

Pruritus Vulvæ.—L. SIEBOURG (*Centralbl. f. Gyn.*, 1901, No. 26) makes the following contribution on the treatment of this vexatious and persistent condition. It was suggested by the fact that often after a copious subcutaneous injection of normal salt solution the skin will remain for several days either deprived of sensation or with depressed sensation. He does not mean to imply that all his cases are subjected to this treatment. He ordinarily manages them by having the cause fully removed

when possible, for example, acrid vaginal and uterine discharges, diabetes, cystitis, foul pessaries, pudendal vermin, etc. When the cause has been ascertained and removed he finds that ordinarily the itching disappears, but sometimes the patients are so nervous and irritated by their former trouble that the injured skin continues to irritate and a pruritus which ought to have vanished with its cause is maintained. For such cases he finds good hygiene, as to food, exercise, sleep, baths, coitus and douches, of great importance. Then resort may be had to some lotion producing local anesthesia, for example, one containing cocaine, menthol and phenol. Several ointments are of signal use even if the skin and mucosa are broken. His favorite is cocaine 2, menthol 5, phenol 1, vaselin 20 parts, spread upon gauze and held tightly in place with a T-bandage. In the more chronic cases he has the patient paint the parts with a mixture containing spir. rusci 50, acid. salicyl. 5, resorcin 1 part, night and morning. When these means have failed he uses injections of copious quantities of normal salt solution until the vulva is much swollen in both the skin and mucous aspects. The idea is to rupture by distention, if possible, the fine nerve filaments and thus destroy the itching. Various medicaments might be added, but the simple saline solution is the least dangerous. His success has up to the present time been very marked.

Pseudarthrosis.—F. COLLEY (*Centralbl. f. Chir.*, 1901, No. 26) relates a successful treatment of a case of pseudarthrosis of both bones of the forearm following a simple complete fracture due to very slight trauma. The comparative insignificance of the injury, together with the failure of any union after all the ordinary means of treatment had been diligently tried, suggested the possibility of a pathological fracture due to some neoplasm. An exploration and microscopical examination resulted negatively on this point, but not the slightest callus could be detected. Severe delirium tremens now set in, which forbade the undertaking of any bone suture. While maintaining the fragments in the best possible apposition with splints, he thought of irritation of the bone ends. For this purpose he used the method originally suggested by Arthur Barth, namely, bone ashes. He took femora of beeves and reduced them to ashes which he pulverized and then rendered sterile by heat. This mass he suspended in a mixture of gum arabic and water which was also sterilized by boiling. Finally a thin fluid mass was obtained which could be forced slowly through a large size syringe. Through his original exploratory wound he injected 10 c.c. every four weeks and succeeded in producing the desired results, first irritation, then callus-formation and, finally, ossification. He has been so pleased with his cure, which a year after the experiment is still good, that he has undertaken a long series of observations among animals, the net results of which will be published in full at a later date.

Castration For Tuberculous Testes.—VON BRUNS (*Arch. f. klin. Chir.*, B. 63, H. 4) states

that the ultimate results of castration, unilateral and bilateral, for tuberculosis of the testicles are a matter of great importance and have long been an object of dispute. As a contribution toward the settlement of this question, he went through the records during the past fifty years at the clinic in Tübingen and gives the following conclusions. As to whether the whole testis or the epididymis and whether one or both organs should be removed, he sums up the arguments as follows: The removal of the entire testis is often unnecessary, because the epididymis is usually the first and only part to be involved. Therefore, with an early diagnosis it is sufficient to remove only the evident foci of the disease. Castration on one side is not justifiable, because the other elements of the genito-urinary tract are so often involved as to render its result null. This depends entirely upon the theory that testicular tuberculosis is a disease descending from one of the upper genito-urinary viscera. As a matter of fact, there is nothing to prevent the focus being primarily and simply testicular and later, by ascending involvement, attack the seminal vesicles, prostate, bladder, ureters and kidneys. Double castration should always be avoided, first, because when both testicles are attacked the rest of the tract is also involved, and, second, because of the psychical and moral effect upon the man. In support or destruction of these contentions he collected 111 cases with a subsequent history of each up to the limit of thirty-four years after the operation. Of these 78 were unilateral, 33 bilateral true castrations, i.e., without attack upon the seminal vesicles or prostate. As to the progress of tuberculosis of the epididymis into the main testis, he found that within two months 18 per cent., three months 24 per cent., six months 40 per cent., and later than six months 60 per cent. of the testes had become diseased. Hence, within the first half-year nearly half of all cases have suffered extension and removal of the epididymis is only half the work. In his series of cases he finds 38 per cent. bilateral in their disease. Of these 23 per cent. had been castrated on one side and later had the other break down. As to the final prognosis, he elicited that 12 per cent. died of genito-urinary tuberculosis, 15 per cent. of pulmonary and other tuberculous disease. Of these the great majority were so diseased before the operation. Further, in 26 per cent. the second testis broke down. Of the cures he finds 46 per cent. permanent and the duration varied from three to thirty-four years. Such are the records for the unilateral castration. For the bilateral operation, about the same proportion died of genito-urinary disease, 15 per cent., 25 per cent., of scattered tuberculosis, while 56 per cent. show cures locally enduring from three to thirty years as the possibility of the second testis breaking down is, of course, expunged by the operation. No single case of insanity occurred. Of the total just 50 per cent. were cured for the balance of life. In

general death ensues in all who have tuberculous processes higher in the genito-urinary tract or elsewhere in the body.

Mammary Cancer.—W. L. RODMAN (*Annals of Surgery*, July, 1901) states that for the best results of removal of cancers of the mammary gland the following practical points must be observed. Not only the entire gland, but also all the adjacent supernumerary masses of glandular tissue must be removed, because these likewise have a tendency to a marked degree to become cancerous. Operative convenience and good sense require that the gland be dissected off from the upper regions downward, clearing Morenheim's space and axilla at the same time, and from the sternum outward. The skin incision must be very free so as to embrace all of the skin covering the gland. Both the pectoral muscles and the fascia overlying the intercostal muscles should be removed at the same time. In young women cancer is apt to follow a very active and short course. Hence all doubtful cases must be carefully investigated pathologically before the whole gland is sacrificed. In order to secure the best results of a total ablation of the mammary gland as to the primary healing of the wound he finds that Warren's incision is the best. The special feature of this method is that an inverted Y-shaped incision joins the posterior sweep of the main cut and a vertical straight one meets the anterior sweep over the subclavicular space. By undermining, the four flaps thus created can usually be brought into apposition and commonly primary union ensues and the patient is discharged in ten or twelve days.

Wounds of the Venous Sinuses.—H. R. WHARTON (*Annals of Surgery*, July, 1901) gives an analysis of seventy-five cases of wounds of the venous sinuses of the brain and makes the following deductions: (1) Wounds of the venous sinuses should be classed as among the more serious injuries, being followed by a high mortality from both extra- and intracranial hemorrhage and from infection; (2) they are especially liable to infection resulting in septic thrombus and pyemia; therefore, the greatest care must be exercised to render them aseptic and to keep them so; (3) the most satisfactory and usually aseptic method in controlling the bleeding is by gauze packing; (4) ligation of the venous sinuses is a procedure of peculiar and definite difficulties which prevent its employment except in those free wounds where the sinus is fully exposed and forbid its application in the ordinary accidents to the sinuses; (5) the tying of lateral ligature upon a sinus is much easier and less dangerous, but is available only in small wounds; (6) the suturing of small wounds of the sinuses is also a very valuable means of hemostasis, but cannot be used except when a small wound is freely in view; (7) forceps pressure is a very ready means of controlling hemorrhage from one of these channels but has its own peculiar dangers and has really no distinct advantage over the other methods.

Significance of Retrodisplacements of the Uterus.—G. HEINRICIUS (*Arch. f. Gyn.*, B. 63, H. 3) in discussing the pathogenesis and clinical status of retrodisplacements of the uterus, especially retroversio-flexio uteri, comes to the following conclusions. In the first place he considers that the typical text-book symptom-complex of this condition does not belong to simple but to complicated cases of this condition, namely, to the associated lesions and not to the mechanical displacement itself. Such symptoms are due to the concomitant endometritis and metritis and other inflammatory conditions. True circulatory stasis by mechanical interference with the blood-current he denies, stating that after ligating the main venous outflow, as in ablation of the tubes and ovaries, no uterine turgescence occurs, and pointing out that in simple cases all signs of it are also absent. As to the cause of this backward position of the organ he states that most cases are entirely a matter of developmental anomaly. In about the same percentage the condition is found in virgins, nulliparæ and paræ. In a very few instances, indeed, is a previous anteversion or a previously normally placed uterus converted into a retrodisplacement by childbirth. The treatment of retrodisplacements consists first in diagnosing and then in curing the associated lesions, namely, the endometritis, metritis, bladder affections, simple digestive constipation and other gastro-enteric functional disturbances, simple or pronounced neurasthenia, hysteria, etc. He denies that the backward bending of so small an organ can cause an obstructive constipation in the vast majority of the cases, because we have a very large pelvic strait in which often large tumors are found existent for many months without this symptom. The influence of the uterus upon the bladder is also combated for the same reason. Pain in the back is a symptom of which many women complain, not because their womb has any rational physiological relation with their loins, but because through some cause, often removable, they have strained their back muscles or are subject to the musculo-nervous symptoms of hysteria or neurasthenia. It is not reasonable to believe that an organ which has so little influence upon the life of the patient and without which so many women live well and long, can possibly be the origin of even a part of the curious manifestations ascribed to it. It is certainly a fact that when these associated symptoms are treated as indicative of entirely independent conditions, the patients get entirely well, although the womb remains in retroversioflexion. It is hence to be observed that no woman be told of such displacement before a continuous and rational treatment of these accompanying conditions be followed, in order to avoid the depression, fear and dread incident upon knowing that her womb is back—an organ movable and certainly in many positions each day.

Linen Lace in Surgery.—F. KUHN (*Centralbl. f. Chir.*, 1901, No. 24), in endeavoring to avoid the maceration incident upon the use of rub-

ber tissue and the frequent tearing away of the skin-grafts consequent upon applying some of the other usual means of protection, came upon the suggestion of adapting ordinary rather coarse-mesh linen lace, such as is used for window curtains, as the primary dressing. He makes it impermeable to water by saturating it with celluloid. After the grafts are in place this "lace guard" is laid evenly and smoothly over them and extended well beyond the limits of the granulating area upon the sound skin. Here it is carefully gummed down by the aid of collodion. Then the usual absorbent outer dressings are applied over this. The advantages of this simple device he has found to be as follows: (1) the meshes of the waterproof lace hold the grafts firmly in place; (2) the regular joints of the lace impose an even pressure at every point, which can be increased by heaping on several thicknesses; (3) the highly porous covering thus provided is a very certain outlet of the various wound secretions. He has also found that all the usual difficulties of the Thiersch method of skin-grafting have been overcome by this little technic.

Optic Atrophy in Diabetes.—H. F. HANSELL (*Jour. of Nerv. and Ment. Dis.*, July, 1901) reports a case of binocular hemianopsia and optic nerve atrophy associated with diabetes mellitus. Optic nerve disease is a rare complication of diabetes, recurring double iritis being the most common eye lesion. Amblyopia without ophthalmoscopic changes, often referred to by writers, is probably due in all cases to an intracranial lesion or is the earliest stage of the retrobulbar neuritis which leads to atrophy. Hemianopsia, optic nerve atrophy and amblyopia are probably but indication of the three stages of retrobulbar neuritis leading to atrophy.

THERAPEUTIC HINTS.

Corset for Movable Kidney.—The corset should be as long in front as can be worn, to elevate and support the redundant lower abdominal wall and form at the waist line a shelf on which the kidney may rest. Having thrown the corset about the waist, the patient lies on the bed, draws up the knees, places the head on a pillow to relax the abdomen, and pushes the kidney into place. She then hooks the corset from below upward, the redundant abdominal wall being drawn within it. She should never be permitted to maintain the upright position without her corset on. The best corsets are made to order but the "straight-front" corsets of the shops give very good results.—A. E. GALLANT in *American Journal of Obstetrics*, July, 1901.

Massage after Gonorrheal Epididymitis.—During the acute inflammation, advise rest, preferably in bed, with the scrotum supported, and the local application of leeches, ice, emollients, baths or mercurial and belladonna ointment. Bouisson applies chloroform, Paquelin, the con-

tinuous current, and Velpeau, paracentesis to relieve tension. Many men prefer compression by bandages, collodion, suspensory, etc. After the acute inflammation has subsided, the permeability of the vas deferens may continue impaired by exudates and the effect of the inflammation on its wall. Here massage has the mechanical effect of pushing the exudate onward, promotes its rapid absorption by increasing the lymphatic and venous circulation, and stimulates the nutrition of the tissues by increased flow of blood from the arteries.—CHARLES COLOMBO in *Revue de Thérapie Physique*.

Heroin.—The lethal dose of heroin is one hundred times greater than its therapeutic dose, whereas the fatal dose of codeine is but ten times the amount usually prescribed. Heroin does not affect the appetite nor disturb the stomach, nor in ordinary dose does it have much effect on the circulation, but, through an action on the respiratory center, breathing is slowed and the depth and strength increased. No narcotic effect is noted except after a large dose, but it causes dryness of the pharynx and slight irritation of the fauces. As an analgesic it is inferior to morphine. It can be recommended, however, as superior to morphine or codeine in conditions of dyspnea or irritative cough, though as yet it is not known whether the habit is likely to be formed or not.—B. D. GILLIES in the *Montreal Medical Journal*, June, 1901.

Spinal Anæsthesia.—It is not necessary to have the needle point in the spinal canal, as anesthesia is produced if the solution is injected about the region, yet the canal is easily found and the same amount of drug is more effective when placed in the canal. The needle is best inserted between the fourth and fifth lumbar vertebra, the tip of the fourth spinous process being a guide. The patient should be in a sitting posture with spine well flexed. The cocaine may be weighed out in envelopes and sterilized dry, then made into solution with sterile water, or the solution may be sterilized in a water-bath. Analgesia begins in the soles of the feet and extends upward to the clavicle. Some patients become pale and nauseated in a few minutes and vomit, or there may be a tremor of the lower extremities, talkativeness, or occipito-cervical headache. Sometimes these symptoms are delayed for some hours. Bier found that the cocaine necessary varied in individuals from 1-3 cg. (gr. $\frac{1}{6}$ - $\frac{1}{2}$) and that in many cases cocaine poisoning supervened. He tried tropacocaine, eucaine and other drugs, but found none so efficient as cocaine. The most annoying symptom following its use is headache. This is somewhat relieved, however, by codeine, bromides, hyoscine hydrobromide, or nitroglycerin. The special indications for spinal anesthesia in surgery are general peritonitis, distention of stomach and intestines, lung disease, disease of the kidneys, and advanced disease of the heart. It is also used in sciatica and in obstetrics.—ANGUS MCLEAN in the *Philadelphia Medical Journal*, July 6, 1901.

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COMMUNICATIONS in the form of Scientific Articles, Clinical Memoranda, Correspondence, or News Items of interest to the profession are invited from all parts of the world. Reprints to the number of 50 of original articles contributed exclusively to the MEDICAL NEWS will be furnished without charge if the request therefor accompanies the manuscript. When necessary to elucidate the text illustrations will be engraved from drawings or photographs furnished by the author. Manuscript should be typewritten.

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SATURDAY, JULY 27, 1901.

NEW YORK'S HEALTH AND STREET CLEANING DEPARTMENT.

NEW YORK is a very dirty city at present, disgustingly dirty in fact. A Turkish town could hardly show more garbage, more dead animals or more general filth than some of the crowded streets of this much governed town. The day of Waring is like a white dream; but under Waring the Street Cleaning Department dreamed no dream; it worked. Now it leans back and fans itself and shrugs its shoulders. A great excuse pervades New York. It lies along its thoroughfares, it monopolizes its corners. It is the tunnel. While the avenues are turned into earthworks and the centers of traffic are blockaded, the Street Cleaning Department feels that it would be a waste of the people's good money to be continually cleaning up a street that needs just as much attention the next day, and so dirt and mud and dust and waste paper accumulate around the unsightly gaps in the streets and in the remoter corners of the city.

Added to the tunnel excuse is the hot wave excuse. The Street Cleaning Department is adjusted to an average daily allotment of dead

horses, and starved cats in summer, but when the number jumps up ten times, what else can it do, but jog along and bury them in the order of their decease? The same sort of excuse might have served Colonel Waring when a young blizzard passed over the city and dropped uncounted tons of snow into the streets of New York for the citizens to plough into mire and slush. But Col. Waring was a man of action and not of excuses. He had obtained from reliable sources the information that New York was subject to snow storms that resulted in wet trousers and skirts for the pedestrian millions of the city, and that grip, pneumonia and sudden death were the inevitable result of jogging on and letting Nature take her course with the snow, as she is doing at present with the bodies of dead beasts. He was prepared for the emergency, and the people of New York went to their business as dry of foot as the Israelites crossing the Jordan.

Now the present Street Cleaning Department could have forecast how the combination of a tunnel and a hot wave would affect the city's appearance, and, instead of getting Monday's work done by Saturday night and keeping the Sabbath in a pious and discouraged frame of mind, it might have had an emergency force ready to do each day's work promptly, to do it in the cool of the day, to do it in the dead of night, as long as it was done.

The dust that is blowing and sifting through the city is a menace to health every hour of the day. The city needs constant sprinkling. The fleas and pests of uncleanness that are beginning to swarm are indicative of plentiful breeding-places that need scrubbing out. The diseases that come from decaying matter are too many to mention. Were we subjects of the Sultan we might shrug our shoulders and say "As Allah wills," but being responsible and intelligent citizens, as well as physicians, we demand better returns for our investments.

ETIOLOGY AND TREATMENT OF "CHRISTIAN SCIENCE."

It is still a disputed point whether the primary cause of "Christian Science" was a mental instability or a clever business venture on the part of its founder. Certain it is that she has displayed great cleverness in her personal proof that in Christian Science there is no such thing as poverty. Like an echo of Mrs. Eddy's voice comes from Chicago the message of Dowie, "the prophet," alias Elijah, alias John the Baptist:

"Listen to the first message of the prophet. You must pay your tithes and offerings."

The contagiousness of the affection may be attributed largely to a desire for novelty. This is well developed in those in whom ideas of a religious character are absolute strangers, or have never been thoroughly awakened and so appeal as completely new, arousing excitement and enthusiasm as does a "revival." The belief is optimistic—no sickness, no poverty—and so attracts pleasure-lovers. These four elements—hysterical excitement, instinctive religious cravings, love of mystery and of pleasure—are the most potent factors in supporting new movements. That which is founded upon the first of these is usually short-lived, and wisely the pseudo-scientists have subordinated this element to the others. The introduction of a garbled religious element is one of the most dangerous features of the so-called science, and its chief aid is the factor of mystery furnished by the meaningless transpositions and combinations of words in its ritual, and by the adoption of the technic of the quack. The gullibility of the public concerning medical matters is most natural because of their ignorance of these subjects, and those who will accept the ministrations of the advertising "doctors" and "professors" are certain to be reached by the additional attraction of the religious element, particularly when this inculcates the doctrine that there is no poverty, no pain, no sin.

Christian Science is dangerous because it appeals to those who, unable to follow an argument logically, are led by meaningless but to them high sounding words. Reaction is sure to follow, as in other movements resting upon unstable bases.

How is this reaction to be hastened and the symptoms of the disease limited? Direct legislation against the so-called Christian Scientists, if it were possible, would merely lend the aid which persecution always does, and would enable them to pose as martyrs, while evasion of any law is possible. Restriction of individual liberty will not be tolerated in this country. It would be difficult to convince many that a man has not the right to his own beliefs, and just this point makes the insertion of the religious element most dangerous. While public opinion condemns the action of the would-be suicide and no difficulty is experienced in securing legislation against one who attempts to take his own life, it is another matter to secure such universal

approval of adverse legislation if the same attempt be made under guise of a religious belief. The so-called Christian Scientist does not openly claim the right of suicide or murder, but does so indirectly by his refusal to accept medical aid, and supports his action by the plea of religious conviction—an inviolable matter. Against this defense direct legislation is difficult and of questionable value. It has been shown, too, that forbidding the practice of Christian Science for pecuniary reward would be ineffacious, as this law could be circumvented by the acceptance of gifts from the patient before or after rendering service claimed to be religious in character.

The point which it appears can be controlled by law is the refusal to permit medical care of others, which bears to their own refusal of such assistance the same relation which manslaughter does to suicide. The enforcement of laws making such wilful disregard of the lives of others punishable as manslaughter seems possible and should be effectual. A man is entitled to free enjoyment of his opinions only so long as they do not interfere with the rights of others. No one has the right to sacrifice the life of another for pecuniary gain or in connection with a delusion. If an attempt were made to escape imprisonment for manslaughter under such a law, on the plea that the defendant believed it right, the only logical conclusion would be that he was suffering from a delusion dangerous to others as well as himself and required confinement in an asylum for the insane. Against such offenders the sanitary code cannot be too rigidly enforced as the rights of others are concerned, particularly in relation to contagious diseases. The recent decision of Judge Tuthill of Chicago that children of parents who refuse them medical aid when ill should be committed to the care of medical institutions is a step in the right direction. To this extent legislation may go, on the ground of defending the rights of the public, without entering too deeply upon the question whether a so-called religion which justifies manslaughter, suicide, and also immorality by claiming that there is no sin, can lawfully be interfered with. To this limitation of results it appears that direct treatment of the acute attack of the delusion must be confined.

Prophylaxis is all important. Reaction against the new fad can most surely be brought about by preparing the coming generation for logical consideration of the delusions which will be

presented to them. General education is of value in enabling the detection of the fallacies with which the doctrines are so filled, but which are carefully hidden from the mind untrained for analytical thought by the barriers of meaningless phrases. The surest means of attack from a medical standpoint lies not in direct opposition by members of the profession, as this is sure to be ascribed by the followers of Mrs. Eddy and by many others to fear of competition.

Education is the greatest foe of superstition and ignorance, and this applies as fully to the treatment of Christian Science as to the overthrow of the power of the quack. The hold upon the community which the delusion possesses is obviously due largely to lack of knowledge of bodily laws. No one who possesses any connected understanding of anatomy and physiology can fail to see that matter does exist and is influenced by matter as well as by mind. To such a person the claim that a rubber plant can be treated effectually by Christian Science, or that all bodily ills can be cured by mental influence, seems as false as that perpetual motion can be secured by appeal to that power. Perpetual motion! What a financial possibility for Mrs. Eddy!

TRICHOTOXICON AND BALDNESS.

It is probable that ever since time began the premature loss of the hair of the head has been regarded as a personal calamity and the unfortunate being afflicted with calvities has been subjected to the unfeeling scoffs of his more hirsute peers. It is a far cry from the jeers of the *ganims* of Jericho, which so infuriated the bald-headed prophet Elisha that he turned upon them and cursed them, whereupon we are told, "There came forth two she-bears from the wood and tare forty and two children of them," to the stigma that in modern days attaches to the first row of orchestra chairs, yet through the ages the finger of derision has been steadily pointed at the luckless baldhead and it has ever been a shining mark for the witticisms of the unregenerate. Therefore it is not surprising that the nature of this deplorable state has formed the subject of much learned ratiocination and many and various are the hypotheses that have been formulated to account for its origin. Some of these seem plausible enough, yet here, as often in other matters, the problem of sex has proved the rock upon which many a well-trimmed theory has split, for but few navigators in this particular stream have

been able to do more than be thankful that woman, at least, is exempt and usually preserves her crowning glory to the very end.

But the ingenuity of the theorists has not been wholly baffled and many have found in the differences in head-gear affected by the sexes an explanation which comforts and satisfies their questing spirits, while other daring searchers after truth have not scrupled to lay bare even the mysteries of the bedchamber and assert that woman's method of emerging from her *robe de nuit*, since it spares her the cephalic friction that attends man's more headlong maneuver, is the chief bulwark and defense of this, her most cherished beauty.

But all these vagaries are destined to speedy oblivion, for a new prophet has arisen and, like young Lochinvar, he comes out of the West. Dr. Delos Parker of Detroit is his name and the *Medical Record* of July 13th is his mouthpiece. From his utterances it appears that an explanation of woman's capillose superiority resting upon true sexual differences has at last been found. Alopecia is a form of auto-intoxication depending upon the absorption of trichotoxicon, a substance formed under the influence of warmth and moisture in the unventilated portions of the lung. Man being an abdominal breather, the apices of his lungs remain relatively quiescent and furnish admirable laboratories for the elaboration of this poison, while woman, through the costal respiration forced upon her by her corset, saves her hair at the expenses of her liver and other abdominal viscera.

In the interest of the dress-reform movement we trust that this information will not become generally disseminated, yet it is pathetic to think how much human suffering would have been averted had the crinicultural value of the corset only been earlier recognized and what multitudes of glabrous calvaria might have been luxuriantly clothed had their owners only learned in time to breathe properly by encasing their manly forms in stays.

TUBERCULOSIS IN ITS HUMAN AND BOVINE RELATIONS.

THE recent announcement of Dr. Robert Koch of Berlin before the British Congress for Tuberculosis that bovine tuberculosis is not communicable to the human species will be received with the deepest interest, but not without much surprise and considerable skepticism on both sides of the Atlantic.

The scientific data and details upon which Professor Koch bases his startling conclusion are not now at hand, but it may not be amiss at this point to recall some observations which may prove difficult of explanation should his conclusion be confirmed by others. For our own part we do not feel disposed to regard, without certain limitations, such a belief either probable in truth or consistent with experience. However, we reserve a fuller appreciation of the distinguished scientist's results and criticism of his arguments for a subsequent time. Of the statement one might well say:

"Till at last the waves so high do rise,
"As seems to bid defiance to the skies."

The belief that bovine tubercle bacillus is incapable of inducing tuberculosis in man is, of course, by no means new. For years there have been advocates of this side of the question; and it is only about two years ago that an article embodying the same conclusion was written by Dr. Edward Moore of Albany, N. Y., who, taking this view of the matter, had made especial use of the results obtained by Dr. Theobald Smith in his comparative study of tubercle bacilli of bovine and human derivation. Although these results suggest certain morphological, cultural and experimental differences they by no means establish any inability on the part of the bovine tubercle bacillus to incite tuberculosis in human beings.

As a matter of fact there is an abundance of clinical evidence which indicates this capacity. Thus Tschering of Copenhagen in 1888 reported a case in point. The sufferer was a veterinary surgeon who wounded his finger while making an autopsy on a tuberculous cow. Local tuberculosis in the wounded part developed in a short time. Lefèvre (*Sur la tuberculose par inoculations cutanée chez l'homme*, Paris, 1888) collected other equally striking examples which would be very difficult of explanation if our present view is incorrect.

ECHOES AND NEWS.

NEW YORK.

Brooklyn Death-Rate about Normal.—The death-rate for Brooklyn for the week ending July 20, 1901, was 485, about the normal rate for this time of the year. Seven of these deaths were due to the heat. The mortality among children was 144.

Green Men for the Work.—On account of Civil-Service complications the Brooklyn

Health Department has been obliged to dispense with the services of the physicians recently appointed on the "summer corps." These men were assigned to do duty as vaccinators and the Civil-Service Commission has ruled that all such must be appointed from an appropriate eligible list.

St. Mary's Hospital Appointments.—Drs. J. Richard Kevin and E. Arthur Parker have been appointed surgeons, and Drs. Thomas F. Mylod, John Lee, Robert Morrison and Joseph Murphy, assistant surgeons.

A Coroner in Trouble.—Affidavits charging Coroner Geo. W. Delap of Brooklyn with unlawfully extorting bribes and conniving at false verdicts at inquests have been placed in the hands of District Attorney Clarke for investigation. The principal charge against Dr. Delap is made by Mrs. Kate Leutz, a widow, who accuses him of extorting \$100 from her on a threat that she could not collect the insurance on her husband's life unless she paid \$75 to him and \$25 to Coroner's Physician Henderson, since deceased. Dr. Delap denies the charges *in toto*.

To Report on Central Tunnel.—As a result of complaints voiced through the *Evening Post*, Commissioner Sexton of the Health Department, this afternoon, sent two inspectors to make a report on the conditions prevailing in the New York Central Railroad tunnel. Commissioner Sexton has laid the matter before the counsel for the Department, and doubts whether anything can be done, even if the inspectors say that the tunnel is detrimental to public health.

To Fight the Mosquito.—The Health Officer of the Port, Dr. Alvah Doty, has decided to take hold of the mosquito question on Staten Island, and attempt the extermination of these pests. A section of the island adjacent to the Quarantine Station has been selected for the test. Dr. Doty said of his plans last week as follows: "We have been at work for the past year in our laboratory on the mosquito larvæ, in order to determine bacteriologically what can be done. The first thing is to determine if the insect produces malaria; the second is to answer the question, if so, can malaria be prevented by the extermination of the mosquito and its larvæ? The test I have determined to make will be applied to a section of Staten Island adjoining our station, and opposite the quarantine islands, in extent about three miles by one and one-half miles. The boundaries of this section are New Dorp Lane, Richmond Road, Vanderbilt Avenue, and New York Bay. All the swamps, ponds, marshes, and wet places will be inspected by men from our laboratory, to determine just where the possible breeding-places are located. The mosquito and its larvæ will be taken in such places, and will be examined to determine the presence of malaria. Local physicians will be asked to co-

operate by reporting all cases of malaria. All intelligent cooperation of citizens also will be requested. In the treatment of breeding-places petroleum will be an important factor. This test is in line with our quarantine work, as the quarantine hospital for yellow fever is located adjacent to the section selected for the test." Some Staten Islanders, annoyed at mosquitoes, have found an extract made from citronella a good means of personal defence. The extract is used like fly oil; that is, rubbed on the face and hands.

Health Department Appointments.—The Municipal Civil-Service Commission recently announced several appointments to positions in the city departments. Among them were the following: Theodore Walser, Assistant Sanitary Superintendent, Department of Health in the Borough of Richmond, \$3,000. Arthur F. Simonson, Lay Sanitary Inspector, Department of Health, Manhattan, \$1,200. Oswald B. Franz, Lay Sanitary Inspector, Department of Health, Manhattan, \$1,200.

PHILADELPHIA.

City Hospital to Be Improved.—The Philadelphia Hospital is to be improved at once, whether the Almshouse and Insane Departments are removed or not. The Petty Island site for the latter has not been decided upon, the prevalence of malaria being an important argument against its adoption. The improvements to be added are to cost \$80,000, being distributed as follows: Children's hospital, \$35,000; hospital for contagious skin diseases, \$35,000; maternity house, \$10,000.

University of Pennsylvania.—The chair of assistant clinical professor of genito-urinary diseases has been filled by the appointment of Dr. Thomas R. Neilson.

Outings for the Indigent of the City.—Movements in aid of the various fresh-air enterprises are unusually popular this summer. The Children's Sanitarium at Redbank is caring for its full capacity daily. The several seaside homes and hospitals maintained at Atlantic City by individuals and corporations of this city are filled and have hundreds on the waiting list. Several of the daily papers have instituted homes for children, started free ice funds, etc. These measures undoubtedly saved numbers of lives during the recent heated spell.

Quarantine Physician a Victim.—Dr. J. R. Caldwell of Chester, late quarantine physician at Marcus Hook, died July 21st. Dr. Caldwell was taken ill some time ago as the result of fumigating a ship and was in a critical condition during the past month. He served with distinction during the Civil War and was at one time a leading politician.

Hospital Appropriations Reduced by the Governor.—Mention was made in this column some time since of the dissatisfaction

caused by certain appropriations by the Legislature. The changes made by the Governor before signing the bills have shown that a portion of the storm of protests were not called for, but they have caused additional disappointments. Many of the reductions affect the smallest institutions of the State, but the larger ones have been greatly reduced. The appropriation bills as signed include the following hospitals: University of Pennsylvania, \$10,000; Jefferson, \$50,000; Medico-Chirurgical, \$40,000; Hahnemann, \$5,000; Samaritan, \$5,000; German, \$38,000. The State Homeopathic Hospital for the Insane gets \$250,000. The Free Hospital for Poor Consumptives receives \$60,000.

CHICAGO.

The State Board of Charities.—This body has issued its quarterly bulletin for the three months ending June 30, 1901. The average number of inmates of the fourteen charitable institutions of Illinois during the quarter was 9,000. The net average cost *per capita* was \$38.78, and the gross cost \$43.91. The total cost of all the institutions was \$432,743.66, and their total income \$479,407.29. There is a total surplus of \$103,666.53 in charity funds, and only \$36,669.29 of debts.

Appointment of Dr. Porter.—Dr. Ralph S. Porter has been appointed surgeon of volunteers with the rank of major. He graduated from Rush Medical College in 1897. At the outbreak of the Spanish-American War he enlisted with the Second Illinois as assistant surgeon with the rank of lieutenant, and served with that regiment until May, 1899, when he returned to Chicago. On July 1st following he was appointed assistant surgeon to the Thirty-first Volunteers and assigned to duty in the Philippines. Major Porter is said to be the youngest medical officer in the United States Army to-day with the rank of surgeon major.

Dr. Senn's Trip around the World.—Under date of July 14th, Dr. Senn writes his first of a series of articles for the *Chicago Tribune*. In it he deals with the importance and necessity of professional men, particularly physicians, taking rest and recreation. The physician who has the interests and welfare of his profession at heart chooses a vacation which will secure rest for his weary brain and at the same time give him an opportunity to increase his knowledge of the various diseases and their treatment. A leisurely journey from one medical center to another will accomplish this, especially if combined with an ocean voyage. Such an itinerary gives him an opportunity to visit different countries, observe the habits and customs of the people, familiarize himself with the advantages and methods of education of different institutions, cultivate the acquaintance of men eminent in his profession as authors, teachers and practitioners, and observe

their methods of treatment. All this requires no special mental effort, and yet fills the storehouse of practical knowledge to a wonderful extent.

Physical Examination of Female School Teachers.—The physical examination of 300 candidates for places as school teachers was recently concluded. The average of the candidates taking the test was exceptionally high. Only a few were rejected, although the requirements were severe. The examinations were much the same as those of applicants for life insurance, with added optical and aural tests and examinations for evidence of disease and physical deformities. The result of the examination proves the truth of the conclusion reached in the work with school children, *i. e.*, that there is a distinct relationship between physical condition and intellectual capacity, the latter varying directly as the former. In the tests for vital capacity the great breathing capacities of the candidates who had taken gymnasium work at the school and had been prominent in athletic sports was in great contrast with those who took little physical exercise, suggesting that vital capacity increases and decreases with the amount of activity.

Finds Many Deformities.—Among the hundreds of cases of freak hands or feet which have been discovered and recorded by Professor Frederick Starr, of the Anthropology Department of the University of Chicago, are fifty minute descriptions of Chicagoans who have either too many or too few fingers and toes. Professor Starr has made another appeal to the members of his class for the names and addresses of people with superfluous members. He announced that it was his purpose to get full data upon 500 cases and then he would begin to formulate a new theory. Already he has records of 350 cases, some of the subjects having six, seven, and even nine fingers or toes on one extremity. Among the observations which he has already made is one to the effect that such deformities are more common in large than in small families.

Bogus Philanthropist.—Warden Healy of the Cook County Hospital recently discovered that a woman has been masquerading as a benevolent worker, when her real business has been to solicit patronage for a certain lawyer who makes personal damage suits a specialty. Although her ostensible mission was to bring tracts, flowers and sympathetic messages to the suffering, she was overheard to urge the objects of her attention to retain Attorney — as their legal representative, and the Warden, who is making a heroic effort to clear the hospital of all claim agents, gave orders that hereafter bogus philanthropists be refused admittance to the wards.

Establishment of Sanitarium at Janesville, Wis.—Several of our leading physicians recently visited Janesville to consider the establishing of a large sanitarium at that point.

GENERAL.

Viscogen, a New Milk Adulterant.—Housekeepers and pure-food commissioners have a new foe to fight. It is viscogen as a milk adulterant. It has been found by inspectors of the Dairy Department in Minnesota, and, so far as known, its use is yet confined to that State. When its properties become generally known, however, it may confidently be looked for elsewhere. It is a syrup composed of sugar, lime, and water, about the color of water, and is used chiefly to make the milk appear richer than it really is. When viscogen is placed in milk or cream the lactic acid turns the lime in the fluid into a white, thick substance, which, assimilating with the milk, gives it an appearance and taste of great richness. It is possible through its use to palm off upon customers milk and cream which are far below standard.

Tuberculosis Among the Indians of South-east Alaska.—Dr. Fox, of the Marine Hospital Service, reports on this as follows: "While in Alaska I learned that tuberculosis existed among the natives to quite an extent. While my observations on the subject were very superficial, I had a number of cases pointed out to me by the physicians as being of a tuberculous nature, obtained histories of hemoptysis, and saw many cases with symptoms of cough and a very suspicious-looking, profuse expectoration. Not only is the pulmonary form common, but one sees many cases of tuberculosis affecting the cervical glands and the bones and joints. The good effect of plenty of fresh air, which the Indians obtain while roaming around in the warmer weather, is rendered valueless by the evil effect of filthy surroundings while housed for the winter. Their houses are very dirty; in fact, I suppose they are not scrubbed out from one year's end to the other. Several families are crowded into one house, and when we consider the fact that many of them expectorate on the floor, the sputum, no doubt, often swarming with tubercle bacilli, it is no wonder that tuberculosis is so prevalent."

Public Tuberculosis Sanitarium for England.—At Tuesday's session of the Tuberculosis Congress, the Duke of Cambridge announced that a gift of £120,000 (\$600,000) would be forthcoming for the purpose of establishing a public tuberculosis sanitarium as soon as the recommendations of the Congress concerning its establishment had been formulated.

Connecticut Consumptives' Hospital Begun.—Work upon the Consumptives' Hospital that is to be erected on Newington Mountain, a high suburban section of Hartford, was begun last week. The State has appropriated \$25,000 for the enterprise, and an amount nearly as large has been contributed by private subscriptions. The undertaking represents the

first effort made in Connecticut for the segregation of the victims of pulmonary tuberculosis and their isolation treatment in an institution. The hospital building will be 276 feet long, and the central section will be two stories high. One wing will be for men and the other for women. The medical profession of the State is taking a keen interest in the project.

Opening of the Tuberculosis Congress.—Some twenty-five hundred British and foreign delegates were present at the opening of the International Congress of Tuberculosis, which His Royal Highness the Duke of Cambridge opened Monday, July 22d, in behalf of the King. It may be doubted if the roof of St. James' Hall ever covered a more distinguished assembly. His Royal Highness was chairman, immediately supported on the right and left of the platform by the American and French Ambassadors, the Ministers of Portugal, Denmark, the Netherlands and Greece; the Marquis of Lansdowne, Earl Cadogan, Lord Strathcom, the Lord Mayor, Lord Lister, Lord Derby, Sir James Blyth, Professor Clifford Allbutt and Sir James Crichton-Browne, while in the serried ranks which filled the tiers of the great platform were the Duke of Northumberland, the Marquis of Bath, Earl Spencer, Colonel Fitzgeorge and Professor Koch. Nearly three hundred other leading representatives of British, foreign, American and colonial states and associations were present. Mr. Malcolm Morris, Honorary Secretary, read the report of the Committee, which laid emphasis on the part taken by His Majesty in promoting the Congress, and the assistance rendered by the Marquis of Lansdowne and Mr. Chamberlain in forwarding the invitations to foreign countries and the colonies. The Duke of Cambridge said: "It becomes my duty to open the Congress at the request of His Majesty the King who had intended personally to have taken the chair, which under the present circumstances he cannot do."

Shortly before the close of the afternoon's proceedings the following telegraphic message was received from King Edward:

"I have just received your telegram, and thank you for having kindly consented to open the Congress in my name. I am glad to hear that the ceremony passed off so well. I pray you heartily to thank for me the eminent men belonging to almost every nation who have assembled to-day under your presidency, and to express to them my earnest hope that the valuable information which they will give to the world as the result of the deliberations of the British Congress on Tuberculosis will further assist in mitigating that dire disease which has baffled the most distinguished physicians so long."

"EDWARD REX."

Lord Lansdowne, in behalf of His Majesty's Government, tendered a cordial welcome to the foreign delegates, saying: "This nation

has lately been passing through all the anxieties and sorrows of a prolonged war, which has carried to many of their homes desolation and calamity. But no war that was ever waged brought with it anything like the burdens of misfortune which tuberculosis from time immemorial has carried to every land. Happily, they are no longer regarded as an inevitable scourge."

Lord Lister spoke for the medical profession of the islands. Thanks, he said, to the illustrious man who would address them tomorrow, Dr. Koch, they now knew the enemy they had to fight. They also knew from Dr. Pasteur that this enemy, the microbe of tuberculosis, like all others, was incapable of originating *de novo*, but must in all cases be derived from a similar organism. Here there arose a hope, a splendid prospect of prevention. But they did not look to prevention only; they might also seek to cure consumption. In this respect, matters recently had become much more hopeful. They were learning more every day of the powers of the animal organism to resist the invasion of the bacillus. The physician might learn something of the surgeon in this respect. They could sometimes sweep away the bacillus and restore the organism affected to its pristine health. He hoped the deliberations of the Congress would be fraught with good, but the general public must help the physician and surgeon. He trusted that the assembly of scientific men from all parts of the world would indicate the means by which it would be able eventually to stamp out this great scourge of the human race.

Obituary.—Dr. Adolph W. Dunbar, a well-known young physician of Brooklyn, died on Saturday of typhoid fever at his home, 22 Seventh Avenue, in his twenty-eighth year. He was a graduate of the Polytechnic College in Brooklyn, Princeton College and Bellevue Hospital. He was a member of the Crescent Athletic Club, the Princeton Club and the Long Island Medical Association.

Dr. George A. Blanchard, Assistant Surgeon of the Thirteenth Regiment, died July 19th of typhoid fever. He served as surgeon throughout the Spanish-American War.

Dr. L. Wolff, widely known among the medical men of Philadelphia as a throat and nose specialist, died suddenly July 21st, of Bright's disease. Dr. Wolff was formerly on the staff of the German Hospital, but lately had given his entire attention to the practice of his specialty.

Plague in New York Harbor.—A case of plague has just been discovered in an entering vessel in New York Harbor.

State Laboratory Opened.—The State Laboratory for the production of anti-typhoid, anti-tetanus and other remedial sera has just been opened.

CORRESPONDENCE.

VALVULAR DISEASE AND PULMONARY TUBERCULOSIS.

To the Editor of the MEDICAL NEWS:

DEAR SIR: I should be excessively obliged to the subscribers of your valuable journal for answers to the following queries:

I. In what percentage of the cases of chronic valvular disease affecting the mitral and aortic segments has pulmonary tuberculosis developed as a secondary event?

II. If notes have been kept, kindly give the total number of cases, both of valvular disease and pulmonary tuberculosis, as well as the percentage.

III. If no records have been kept, kindly state opinion as to the frequency of the occurrence of pulmonary tuberculosis secondary to chronic valvular disease at the orifices mentioned above.

IV. What is the effect of valvular disease, mitral and aortic, upon the course of chronic pulmonary tuberculosis?

V. Have lesions of the pulmonary artery valves seemed to predispose to pulmonary tuberculosis? (Statistics on this head are also desirable.)

VI. If chronic valvulitis affecting the mitral and aortic cusps exercises a preventive effect, what is the explanation?

VII. If disease of the pulmonary valves (I refer especially to stenosis) predisposes to phthisis, how is the effect accounted for?

J. M. ANDERS.

1605 Walnut Street, Philadelphia, July 17, 1901.

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, July 12, 1901.

A DULL TIME—THE COMING ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION—THE MYSTERY OF BRITISH MEDICAL TITLES—"DRS." AND "MRS."—GRADUATES AND LICENTIATES—"BRUSSEL SPROUTS"—THE LAMBETH DEGREE.

It has been said by some philosopher that the nation is happy which has no history. If this be so, the medical profession in these realms must be happy at present, for there is absolutely nothing to record in the way of incident. The General Medical Council has ceased to trouble and societies are at rest. The promoters of the Tuberculosis Congress are busy with their preparations, and the wirepullers of the British Medical Association are stringing their puppets ready for the show. At the latter meeting the question of reorganization will be discussed, and as there is a good deal of feeling about the matter in various quarters, there may be what our Parliamentary reporters call a "scene"—indeed, several "scenes"—"in the House." As I have already told you, the great body of the Association cares nothing about reform and the whole movement is the work of a few malcontents. But as a handful of active men who know their own

minds can carry anything against an army of indifferent persons, it is probable that some sweeping measures of "reform" will be carried. What the issue of these may prove to be, it is impossible to foresee; but it is quite possible that it may be to reform the venerable Association itself out of existence. It is pretty certain that large numbers of members will resign if they are called upon to pay an increased subscription and compelled to belong to a Branch instead of adhering with convenient independence to the parent stem. But my business as your correspondent is, I take it, to speak of the present, not the future.

In default of anything better, it may be useful, if not very interesting, if I try to elucidate to your readers the mysteries of our medical titles. I have often had occasion to note that they puzzle our American visitors; and, it must be admitted they are very perplexing to the uninitiated. The subject is suggested to me by the fact that at present the question of titles is being debated in the medical journals, as it has been from time to time for the last thirty years. Within the memory of many people now living the profession in England was divided into physicians, surgeons and apothecaries. The physicians were "Doctors of Physic," as the degree is still called at the Universities of Oxford and Cambridge, and the possession of that academic dignity implied a residence of some years at College and a degree in Arts, with a corresponding amount of culture and all the other consequences of a youth passed in a good social environment. To attain to the rank of physician was the privilege of the few, for graduates of Edinburgh and the other Scottish universities were not held to be of the same standing as the men of the ancient English universities. Indeed, it was not easy for a graduate of any other university than Oxford or Cambridge to be admitted to the fellowship of the London College of Physicians. The foundation of the University of London in the early thirties made "physic" more democratic and realized Napoleon's program of *la carrière ouverte au talents*. The poorest lad who had brains carried the M.D. diploma in his pocket. The late Sir William Jenner used to say that if it had not been for the establishment of the University of London he could never have passed through the sacred portals of the College of Physicians. As a matter of fact, he began his professional life in a very lowly sphere of practice. The shop is still shown where the future medical counselor of Queen Victoria made up bottles of medicine and sold smalltooth combs. At that time the general practitioner or "apothecary" was not a graduate. He had passed the "College" and "Hall," like Bob Sawyer, and called himself "surgeon and accoucheur." Half a century earlier he would have been styled a "man-midwife" like Dr. Slop. The title of "surgeon" was a curious misnomer, for surgery was the branch of the art that he meddled with least. To his patients he was the "apothecary," and dames

of high degree spoke of "using the 'potecary.'" In George Eliot's "Middlemarch" a lady complains that Lydgate is a gentleman by birth and, therefore, she finds a certain awkwardness in "using" him; and English ladies in real life not so many years ago have been heard to say that they did not care to have as medical adviser a man whom they might meet at dinner. I suppose in certain cases the feeling would be something like that which a devout Catholic might feel in dining with his confessor. The apothecaries of course, always went by the style and title of "Mr." because they had no right to that of "Dr." Hospital surgeons, too, were plain "Mr." because they were generally not graduates of a University, but members or fellows of the College of Surgeons. So thoroughly established, indeed, is the custom that even nowadays when there are many Doctors of Medicine holding appointments as surgeons to hospitals, etiquette forbids them to use their title of Dr.

Nowadays there has been a great leveling up in point of education, and the rank and file are no longer content to be even "a little lower than the angels." Besides, there are greater facilities for getting a university degree, and one degree is pretty much as good as another, except that the doctorate of the older universities still carries with it a certain prestige, and that of London is held to represent the greatest amount of book work. But there is still a large proportion of the profession in England who, from being in too great a hurry to get into practice, or from not realizing the disadvantages at which the want of a degree would place them, were satisfied with a license. This can be got from the College of Physicians and Surgeons in London, Edinburgh and Dublin, from the Faculty of Physicians and Surgeons of Glasgow, and from the Society of Apothecaries, London. Holders of these licenses are strictly not titular "Drs." and, though courtesy may often concede the title, discourtesy can always refuse it. The Universities nearly all give the degree of "Bachelor" as well as "Doctor," of Medicine; and many are content to remain "M.B." without going on to the higher degree. Bachelors of Medicine have no right to claim the title of "Dr.," though they generally assume it; indeed, the Universities of Oxford and Cambridge expressly sanction the assumption everywhere except within the precincts of the University.

In Scotland where a university education has long, without the help of Mr. Carnegie, been accessible to every one who cared to work for it, all practitioners, with very rare exceptions, are graduates. But in England the majority are licentiates and the same in a less degree may be said of Ireland. But it is becoming more and more the rule to take a degree, and the licentiates find themselves more and more handicapped in the race of professional life by the want of one. Hence, every now and then a wail goes up from them, and they call on the Colleges, on the General Medical Council, on the British Medical

Association, and on the Government to do something for them. Some of them go abroad and pass a hurried examination, through an interpreter, and come home with all the blushing honor of a Belgian degree full upon them. This degree which does not give the right to practise in the country where it is issued is not thought much of, and the holders of it are playfully termed "Brussel sprouts." A few manage to get a degree from the University of Durham which humanely offers to examine practitioners of fifteen years' standing. But most of the licentiates would like to get a degree without the ceremony of an examination.

There is no doubt that it is a hardship for men in middle life to find themselves at a disadvantage with younger competitors who have had greater facilities for getting a degree. Twenty-five years ago the degrees of the older Universities were still only for the few; now Cambridge is the largest medical school in England. In those days students who wished to profit by the immense clinical material of the London Hospitals had practically only the University of London open to them; and the way to the degrees of that institution was long and also rough and beset with pitfalls. But it is not easy to see what can be done for the numerous licentiates who wish to exchange their plain "Mr." for the more learned prefix "Dr.," as only a university can now grant a degree. I say "now" because till the passage of the Medical Act in 1859 the Archbishop of Canterbury had the power of conferring the degree of "Dr." This was a survival of the medical system which made physicians dependent for the right to practise on the ecclesiastical authorities; and was very rightly swept away as an anachronism and an abuse. It is but fair to say, however, that the privilege was at least in modern times very seldom exercised by the Archbishop. The last holder of a "Lambeth degree" died some years ago.

If by a temporary stretch of grace the privilege—or something analogous thereto, to be exercised, say, by the Privy Council—could be revived, so that a degree might be placed within the reach of every deserving practitioner of a certain age too busy to be able to get it otherwise, a satisfactory solution of a problem of practical importance to a good many worthy men might be arrived at.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

THE DEVELOPMENT OF THE PARASITES OF BIRD'S BLOOD IN MOSQUITOES WHICH RESEMBLE THE MALARIAL ORGANISMS.

HERR NOCHT, at the Biological Section of the Medical Society of Hamburg, April 23, 1901, read a contribution on the development of certain parasites, resembling the malarial organisms, common in the blood of birds in mosquitoes. The author at first rehearsed the development of the

human malarial parasites in their intermediary host, the mosquito, and showed demonstration specimens. This cycle of development had been fully and diligently worked out in its every detail by the Italian investigators after the way had been primarily pointed out by Ross, MacCallum and Koch. The author himself had not yet fully succeeded in observing this cycle in its entirety in the short time since the establishment of the Hamburger Tropenhygienisches Institute. Although a very large number of malarial patients present themselves at the hospital, there are few who harbor the right stage of the parasites for such inoculation of mosquitoes. These types—the crescents of the tropical malaria and the spheroids of the tertian and quartan—are not found unless the patient has undergone several repeated attacks of the disease. Such victims are rarely found to-day among the sailors in a port like Hamburg, because in the short voyages of the modern steamship and brief port-calls only fresh infections occur. Further, the right kind of mosquito does not exist in Hamburg and its environment, namely the *Anopheles*. It also happens that in spite of all possible haste fresh importations of the *Anopheles* from outside arrive too late, because it is not right to keep the sufferers too long without quinine therapeutics. His ordinary source for the supply of the *Anopheles* is the marsh-country of the North Sea, where they are more abundant than the ordinary kind of mosquito, the *Culex*. Therefore in the German marshes there are the necessary kinds of mosquitoes for the intermediary development of the malarial organisms, but no one seems to think it necessary to sleep under mosquito-netting or to take other protection against the disease. The reason for this, as Koch has already suggested, is that by proper treatment the recent infections are not allowed to go on to chronic malarial poisoning, and therefore the disease is almost extinct among the people. Such patients at once seek medical aid, are quickly cured and therefore do not go about among the marsh-dwellers as the source from which the *Anopheles* may infect itself and in turn inoculate others. The author then described the life cycle of the organism similar to that of malaria found in the blood of birds and developing in the *Culex* mosquito. This growth is much more readily observed, because birds and this species of insect are both easily obtainable. He showed with the aid of many photographs the differences between the *Anopheles* and *Culex* mosquitoes, the infection of birds, that of the *Culices* and the later stages of development of the parasites, until that is reached in which the renewed inoculation of the birds is again possible. Further, the speaker discussed the epidemiological characteristics of the malarial diseases and showed how easily its dependence upon the presence of the *Anopheles* could be demonstrated. Notwithstanding this connection, however, there are two important points which still remain open to question. One is the fact that apparently fresh infections are found in regions

which have no mosquitoes. The solution of this possible difficulty is that after careful investigation in such localities, the *Anopheles* mosquito has after all been found. This species is peculiar in hiding by day in cellars, houses, barns, stalls, etc., and swarming only at night. It is therefore much more difficult to find. Moreover, its bite is much less prominent and painful than is first of the *Culex* and can be easily overlooked. The other disputed point hangs on the fact that travellers through solitary wildernesses and marshes, where no human being has been, have been known to be stricken with malaria. The explanation of this interesting enigma probably is that the incubation of malaria may be a very long one, so that the real infection in such cases antedates the journey and the surroundings of the journey provoke the invasion. Again, it does not often happen that an expedition remains for a very long time out of connection with some human center, because, in order to carry only small quantities of provisions upon the various short extra journeys, the base must be reasonably near the abodes of man. Koch's findings, which have been fully established by the English, show that the vast majority of the natives, especially the children, are the victims of chronic infections. For the conquest of malaria three different methods are suggested, namely, the British, the Italian and the German. At the outset one must give up any idea of eradicating the disease by destroying the mosquitoes in the affected localities. The Italians have recommended the use of screens in the houses and of protective clothing. These have accomplished much in Italy and Koch has acknowledged that they cannot be useless. But probably Koch would be the last in a malarious district to envelop his sleeping quarters with netting. While in Italy this method of protection must be observed only during a few hot months, if one were to carry out logically the Italian ideas in the tropics, he must year in and year out subject himself to the personal discomforts and sanitary hindrances of it, too little ventilation at night, difficulty in moving about and increase of the heat in the summer. These are the primary objections to the Italian prophylaxis. The British regimen is that mosquito-nets should be employed with judgment in houses and clothing according to the locality and the season. They, however, go one step farther and recognize that the natives in a malarious country are the real hosts of the parasites and the true source of the danger. Consequently, they argue that there should be as wide a separation in every way as possible, dwellings, mercantile and household relations, etc., between the Europeans and the aborigines. This can be carried out to a limited extent, but has many difficulties and obstacles. Its chief weak point is that it leaves the malaria to continue its ravages among the natives unheeded and unchecked. The German plan, which Koch thought out and first formulated, rejects both the points of the British and the Italian investigators and aims to strike at the cause of the trouble, the malarial organisms

themselves. The blood of the natives is taken and examined for them, and such as are carrying the parasite and menacing public welfare are treated with quinine till they are cured and the source of danger removed. Koch recognized the great difficulties in the way of such a plan in a populous place, but on no other basis could he explain the reclamation of such formerly malarious localities as Hongkong, Batavia, etc. It is likely that in any place the regular, persistent, and painstaking administration of quinine would in the long run entirely eradicate the disease.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held Thursday, May 2, 1901.

The President, Robert F. Weir, M.D., in the Chair.

This meeting was held under the auspices of the Section on Surgery.

Portraits of Æsculapius, God of Medicine.—Dr. Charles L. Dana, one of the Vice-Presidents of the Academy, presented a series of photographs of the statues and temples of Æsculapius, the divine patron among the Greeks of Medicine and Healing. Some time ago Dr. Dana was asked where a copy of the portrait of Æsculapius could be found. His interest in the subject was aroused and has resulted in this collection. It includes photographs of all the types in which artists have created Æsculapius' features. The best statue of Æsculapius from an artistic standpoint was found in Melos not far from where the statue of the Venus de Milo was unearthed. This deserves to be called the Æsculapius de Milo and is of the very best Greek art. If not Phidian, it is the creation of a disciple who was very near Phidias. This type has been repeated with shades of difference a number of times. The next best statue of Æsculapius is that of Myron in the museum at Florence. This is also an excellent work of art, artistically only a little lower than the Phidian types. A third group of Æsculapian reproductions are found at Epidaurus near the temple of Æsculapius. Most of these are bas-reliefs. A fourth series of portrait statues of Æsculapius are late Greek or Roman in origin and are of a distinctly lower order of art. In the later statues the godlike calm of the countenance of the God of Medicine is replaced by the sorrowful, troubled features of the human physician, anxious about his patients. Many of the Roman statues of Æsculapius resemble Roman emperors and it is not always easy to distinguish them.

Temple of Æsculapius at Epidaurus.—The temple at Epidaurus existed from about 500 B.C. and was not without votaries until at least 300 A.D. The best-known temple was

built about 380 B.C. For its construction, bids were advertised throughout the cities of Greece, quite as in modern times. Sixty contractors performed different parts of the work. The architect of the structure received about eighteen cents a day, good wages in those days. It took about five years to build and cost about \$35,000 in our money, which represented nearly ten times as much in the money of that time. The temple was not large, about eighty feet by forty. It was especially famous for the handsome sculpture and decorations it contained. Several buildings were attached to the temple, all of them situated within the sacred grove of Æsculapius. There was a rotunda, within which was the sacred spring. There was a dormitory attached to the temple in which devout visitors slept in order to receive in dreams the directions of the God of Medicine with regard to the management of their health. The walls of the dormitory were lined with the votive tablets of those who felt that they had been benefited by the dream suggestions of the gods. The priests were supported and the temple was kept up by the offerings of devout clients of Æsculapius who came to Epidaurus for their health.

Theater at Epidaurus.—Situated at some little distance from the temple was the famous theater, the second largest in Greece. People who came to take the waters of Epidaurus at the sacred spring, to wander through the sacred grove and to live for a time in its quietude, did not neglect the benefits that might be derived from pleasant relaxation. The theater at Epidaurus was famous throughout Greece and was very well attended. It is evident that advantage was taken of all natural means of benefiting health at this old-time health resort and that, as in our modern health resorts, it was realized that relaxation for the mind would do much to benefit bodily ills. Not very much of the temple remains, but sufficient was unearthed about fifteen years ago to enable Greek scholars to restore on paper the temple of Æsculapius and the surrounding buildings as they existed in the olden times. Plans of the façade of the temple and of the interior of the rotunda and the dormitory, with a photograph of Epidaurus as it now appears, were also presented to the Academy by Dr. Dana.

Acute Intestinal Obstruction.—Dr. Howard Lilienthal read the paper of the evening on this subject. It concerned only the clinical aspect, that is, the diagnosis and treatment of the more acute forms of intestinal obstruction. This class of cases has a very high mortality. Death does not, however, take place from retention of feces, for there are many people of constipated habit, who have a movement not oftener than once a week and yet suffer very little inconvenience in their general health. When intestinal obstruction occurs, grave symptoms begin to develop almost at once.

The principal reason for this is the interference with the circulation in the intestinal wall. There are, however, other good reasons. One of the principal ones is the shock incident upon the strangulation of a vital organ. As the stasis in the gut becomes more marked even where peritonitis does not develop, spots of ulceration may occur on the serous surface and gangrene may result. As a consequence of the lowered vitality of the intestinal walls infectious micro-organisms readily find their way out of the gut and the peritonitis develops. The distention of the intestines with gas leads to interference with the heart action and also with respiration and this causes further symptoms and adds distinctly to the danger of the case.

Fatality of Intestinal Obstruction.—True intestinal obstruction is very fatal. According to a good authority, four thousand deaths per year occur in Germany alone from this cause. The same authority inclines to the view that only neuropathic cases of ileus recover. So-called medical cures take place in cases in which there was never any real intestinal obstruction, but only a spasmodic condition. These cases instead of being subjects for congratulation are really more harmful than beneficial. They perpetuate the idea that medical treatment may do some good in genuine intestinal obstruction.

Causes of Obstruction.—Sometimes the adhesions that form between portions of the intestine after an operation cause the obstruction. A case of appendicitis may be operated upon, free pus evacuated, and some weeks later intestinal obstruction may occur. In such cases it must not be forgotten that multiple obstruction may occur and the surgeon must assure himself that while relieving one obstruction he is not overlooking others that may continue the symptoms. In one case Rehn found a gauze compress blocking the gut. He concluded that this had been left in the peritoneal cavity after a preceding operation and had ulcerated its way into the intestine. It is possible, however, that it might have been swallowed.

Prophylaxis of Adhesions.—In order to avoid the formation of adhesions between intestinal coils after operation, the surgeon should exercise great care in handling the gut and not too much of it should be exposed. Deaver is inclined to think that appendicitis is often mistaken for intestinal obstruction. However, there seems no reason to doubt that intestinal obstruction is more frequent after peritonitis. Whenever there is any localized point of sensitiveness in the abdomen, no matter where it may be situated, it is well to think first of appendicitis.

Symptomatic Course.—Vomiting is one of the earliest and most characteristic symptoms of intestinal obstruction. When the obstruction is tight, the vomit may be projected for

some distance. The nearer the obstruction is to the stomach, the sooner will vomiting occur, the more is the shock to the system and the sooner is relief required. The passage of foul gas is of more importance as a sign that the obstruction has yielded than the passage of feces. Some feces may be retained below the obstruction for some time. As a rule, fecal vomiting must not be waited for to confirm the diagnosis. This symptom usually comes too late in the course of the disease for operation to be successful.

Treatment Before Operation.—In adults in whom the symptoms of intestinal obstruction are not very acute and have not lasted long, an enema may be tried and a small injection of morphine given to relieve pain. A large injection of morphine will always mask the symptoms and do more harm than good. A second dose of morphine should not be given. Cathartics are always dangerous. If the patient has been of constipated habit and there have been no stools for several days before the symptoms of intestinal obstruction develop, a large enema is indicated. Important symptoms of genuine intestinal obstruction in contradiction to fecal impaction are the occurrence of ischuria and mouth-dryness. The latter often becomes a very troublesome symptom and it is one that can be depended on for more diagnostic significance than is usually attributed to it.

Atropine Treatment.—Notwithstanding the fact that atropine makes the mouth dryer and so adds to the patient's annoyance, it is sometimes used to overcome the spasm on which the intestinal obstruction depends, or, at least, so to relax the muscular walls of the intestines that Nature has a chance to overcome the obstruction. German observers have reported series of cases in which atropine has proven very satisfactory. In one case as much as ten milligrams have been given. It is claimed that it is antispasmodic and is also tonic in paralyzant conditions of the intestine. It must be given to the verge of delirium. It does more good in chronic cases than in the acute variety. It is extremely doubtful if it ever does any good after stercoracious vomiting has once set in.

Widal's Serum for Intestinal Obstruction.—A very interesting suggestion has come from Professor Widal of Paris with regard to treatment for intestinal obstruction. He considers that the constitutional symptoms of the condition are due to toxins in the blood as the result of the lowered resistive vitality of the intestinal wall due to stoppage of the circulation. He thinks that there should exist in the normal intestinal wall of animals some substance that would neutralize these toxins. He has succeeded in obtaining an animal extract which has given satisfaction in relieving the symptoms of artificial intestinal obstruction in animals. His scheme of therapeutics seems

eminently theoretic and yet considering his authority it must receive due weight.

Danger of Massage.—Massage is often suggested as a remedy for intestinal obstruction. Its employment in very acute cases where considerable changes have taken place in the intestinal walls would probably be followed by a fatal result. There are cases in which massage may do good. These are mainly of the spastic variety of intestinal obstruction, or at the very beginning of subacute cases. One case has been reported where two operations for intestinal obstruction were done and in each case a spastic contraction of the gut was found, so that the diameter of the intestine was scarcely more than that of a lead pencil. At both operations relief was afforded by forcing the contents of the gut, through this narrow lumen and overcoming the spasm.

Technic of Operation.—Dr. Lilienthal has had 41 per cent. of recoveries in his operative interventions, although many of the cases were in almost hopeless condition when the operation was undertaken. From his experience the following technic is advisable: The stomach should be washed out before operation is begun and even before the anesthetic is given. In the worst cases no general anesthetics should be given. The operation can be very well done under local anesthesia. When there is doubt as to where the incision should be made, a small incision that will admit one or two fingers should be made in the right iliac region. It is here, in the vicinity of the appendix, that the great majority of intestinal obstructions occur. If the obstruction cannot be located at once, a long median incision should be made. It is important to relieve the constriction as soon as possible, and the possibility of the presence of multiple obstructions must not be forgotten. The distention of the gut should be relieved by punctures in it opposite the mesenteric attachment which will give vent to the gas and to feces if necessary. Enterostomy should not be done unless a fatal termination is threatening. Little is to be gained by a cathartic after the operation if the obstruction has been well relieved.

Slight Advance in Surgery for Obstruction.

—In discussing Dr. Lilienthal's paper, Dr. B. Farquhar Curtis said that the first public discussion in which he ever took part concerned intestinal obstruction. Notwithstanding the great advancement in surgery during the last twenty years, the successful treatment of intestinal obstruction is still far from being in a satisfactory condition. Patients do not come for operation any earlier than was the custom. Non-acute obstruction is relieved by medical means and the temptation is to wait too long before applying to the surgeon. It is still the common experience of surgeons to get moribund patients, cyanotic, and with intensely distended abdomen.

Progress in Symptoms.—To the symptoms of intestinal obstruction only one has been added within the last fifteen years! This is the presence of leucocytosis as an indication of peritonitis, or of threatening infection of the peritoneal cavity. Although it may seem conventional, the question of differentiation of intestinal obstruction and of strangulated hernia must still be discussed. Not long ago Dr. Curtis was asked to see a patient who had suffered from left femoral hernia, but this had not been down for two years. The patient was stout, yet not overstout. No swelling could be detected in the thigh where the femoral hernia should be looked for. At operation a small strangulated hernia was found, already gangrenous. This was reduced from within; but the patient did not recover.

Despite the advance in medicine and surgery, it is still difficult, if not impossible at times, to differentiate such conditions as pancreatitis and thrombosis of the mesentery gland from intestinal obstruction. When patients are old, malignant disease must always be thought of as the cause of symptoms of obstruction. It is possible for an annular stricture in cancer cases to have a very small lumen and yet produce no symptoms. This becomes plugged by some bit of indigestible material, or loss of power occurs in the gut just above the stricture and feces fail to pass. This condition of affairs will give the symptoms of acute intestinal obstruction very readily. In volvulus the presence of a localized tumor is of great value in indicating the site of the obstruction and showing where the incision should be made for operation.

Rectal Examination.—A precaution that is sometimes neglected and can not be too much insisted on is digital examination of the rectum, as soon as difficulty in defecation occurs. Very often the supposed intestinal obstruction will be found to be due to some pathological condition that can be reached very easily by the examining finger in the rectum. The general practitioner is especially prone to neglect this means of diagnosis.

Operative Technic.—The washing out of the stomach before operation is a great gain. Unfortunately the general practitioner uses this method in order to delay operation and the patient comes to the surgeon when exhausted beyond all hope of relief. As a rule the incision should be made in the median line, because this is more generally advantageous, unless there are distinct localizing symptoms.

Enterostomy.—Dr. Curtis asked leave to say a word in favor of the much-abused operation of enterostomy. It is of great value when patients have been very much weakened by preceding severe symptoms. It shortens very materially the time of operation and relief is afforded as soon as the opening is made. In most cases the artificial anus closes of itself. For enterostomy local anesthesia may be used

much more easily. Then the surgeon may wait until the patient is in better condition for further operative intervention.

Intussusception.—Dr. Charles L. Gibson said that this phase of intestinal obstruction deserves special attention. The mortality of intussusception jumps after the second day from 39 per cent. to 61 per cent. The condition must be relieved then as soon as possible. The septic condition that supervened very soon carries off the patient unless something is done for its relief. If gangrene threatens a portion of the intestine, enterostomy should not be done in the part of the gut the vitality of which has been suspiciously lowered. It is very hard to recognize portions of the intestine that are thus affected from external appearances only. With regard to the location of the obstruction, certain points help one to determine it. If there have been any symptoms of appendicitis, usually the obstruction will be found to exist in the left iliac region. In women, if there have been any gynecological troubles, obstruction usually takes place in the pelvis and a median incision low down must be made. Other circumstances enable us to locate and diagnose the trouble in special cases. Ileus is more liable to take place in old people and it is in this class of patients that pathological conditions consequent upon gall-stones are apt to set up intestinal obstruction.

Medical Views on Intestinal Obstruction.—Dr. Morris Manges said that the only medical treatment of acute intestinal obstruction is surgical intervention. The results of operation are not so discouraging as they were. Mikulicz reports 70 cases with 34 recoveries. It is the medical man's duty to diagnose intestinal obstruction as early as possible and then send for the surgeon. If the medical man waits until the classical picture of intestinal obstruction develops, very little hope is left for successful surgical intervention. The more classical the diagnostic picture the less the chance for recovery. Vomiting and shock are the early characteristic symptoms. Stercoraceous vomiting must not be waited for. A too fine diagnosis is dangerous. Extreme distention of the abdomen makes diagnosis very difficult. The importance of rectal examination cannot be too much insisted on. The symptoms of developing intestinal obstruction may be very insidious and deceptive. Passages of gas may occur, yet there may be no relief afforded to the symptoms and the patency of the stricture is not indicated. More important than the presence of gas in the rectum is the foulness of the gas that is given out. Indicanuria has its significance. An early and more important symptom is the presence of albumin, if it is known that it was not present in the urine before. This forms an important symptom of beginning peritonitis. Drugs very seldom do much good and their administration, as a rule, only serves to delay operations and to increase

the danger. Large doses of atropine have been given, but it is doubtful if they ever did good. One-twelfth of a grain of atropine does not produce very enviable feelings in the patient. It seems probable that the cases in which the atropine treatment proved favorable have been reported. The others, in which it did no good, were passed on to the surgeon and failed to be reported by the medical man. The employment of atropine has proved useless at Mt. Sinai Hospital. One of the important symptoms is the reflex nervous shock. The septic condition that develops also affects the nervous system and adds to the depression.

Kehr's maxim with regard to intestinal obstruction deserves to be remembered. He says: "It takes less courage to recommend a surgeon in a case of intestinal obstruction than to attempt to treat the case medically."

Intussusception in Children.—Dr. Koplik said that the symptoms of intussusception in infants often do not develop suddenly, but insidiously. They often seem to point to the presence of an acute catarrhal gastritis, and the differential diagnosis becomes very difficult. In children, particularly, vomiting may occur and then disappear for twelve hours, or more, before reappearing again with beginning collapse. Even bloody vomit may occur, stop completely, and then recur. For the diagnosis of intussusception careful abdominal examination is very necessary. As the belly muscles are tightly distended in order to perform this examination satisfactorily an anesthetic must be given. In children, more than in adults, a rectal examination is very necessary. Whenever the presence of intussusception with intestinal obstruction is suspected, the physician should not wait for fecal vomiting and should not depend on intense prostration to give the relaxation which makes examination and diagnosis easier. In children, particularly, the case may prove fatal before fecal vomiting develops, or even before ordinary vomiting becomes serious.

Dangers of Enemata.—Dr. Robert F. Weir said that the important cause of general symptoms in cases of intestinal obstruction is the septic condition that develops. This must be relieved as soon as possible. After this the shock to the patient from the interference with the circulation and function of an important organ is the most serious element. The shock and septic condition are rendered much more serious in their effects by the increase in intra abdominal pressure. This interference with respiration and heart action adds to the danger of collapse. The distress may be largely increased by the administration of large enemata. Abuse in this matter must be carefully looked for. In one case under Dr. Weir's care an intestinal obstruction proved to be due to an old appendicitis, but many of the serious symptoms in the case were aggravated by an immense collection of water which had been

forced into the colon by injection. When enemata are given, they should not be repeated, unless there is assurance that most of the former injection has come away. As a rule, in the intervals between injections a long tube should be left in the rectum in order to relieve the pressure produced by an accumulation of water.

Spontaneous Relief in Intestinal Obstruction.—Dr. Sells reported a case of a woman of twenty-three, not very tall, weighing 235 pounds, who suffered from obstinate constipation. Symptoms of either an impaction of feces or an occlusion of the bowel developed and large quantities of olive oil were injected, a pint a day for several days. A spontaneous opening occurred through the umbilicus from which a large quantity of feces was evacuated. The case has always seemed to Dr. Sells obscure in its pathology, though he inclines to think that it was a case of intussusception with a contraction of adhesions to the abdominal wall.

Practical Points.—Dr. Lilienthal in closing the discussion said that where there is doubt as to the location of the obstructive lesion of the intestines, it is well to make a small incision in the right iliac region, just sufficient to admit one or two fingers. In the majority of cases the obstruction will be found in this portion of the abdomen. If it is not, nothing is added to the shock and no harm is done. The classical median incision may immediately be made and the operation proceeded with.

With regard to children it must be remembered that, while they bear the shock of intestinal obstruction badly and may die before their symptoms develop to the classical picture of intestinal occlusion, they bear operations very well. Certainly in this class of cases operations should be done much sooner than is usually the custom. It is much better to disturb the family by the suggestion that a surgeon should be called in early in the case than to endanger the little patient's life. Too much stress is laid on the fact that the friends of patients are disturbed by the suggestion of surgical interference. This is a relic of the time when operations upon the abdomen were practically a last resort and when they were done only with a forlorn hope that the patient might possibly be saved. Needless to say, the present standpoint of physicians and surgeons with regard to abdominal operations is very different to this.

BOOK REVIEWS.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Under the General Editorial Charge of GEORGE M. GOULD, M.D. Surgery. W. B. Saunders and Company, Philadelphia and London.

THE present is a worthy addition to this ex-

cellent series which has attained a well-deserved popularity with the profession. The plan adopted last year of issuing two volumes, one devoted to medicine and the other to surgery, is continued and the list of contributors remains practically unchanged. The volume is adequately illustrated and well indexed, while all the more important articles receive brief editorial comments which the eminence of their writers makes well deserving of consideration.

THE TECHNIQUE OF SURGICAL GYNECOLOGY. Devoted Exclusively to a Description of the Technique of Gynecological Operations. By AUGUSTIN H. GOELET, M.D., Professor of Gynecology in the New York School of Clinical Medicine. International Journal of Surgery Company, New York.

THIS book, as the title and preface declare, is devoted exclusively to the technique of gynecological operations. The indications for any particular operation in a case in which there might be a choice of several procedures are not discussed. Indeed, the volume is so limited in its scope and so exclusively personal in its character that it might well have been entitled "The Author's Technique in Surgical Gynecology." The preparation of the patient for operation is clearly and forcibly presented in the first chapter and its importance is wisely emphasized. Then follow chapters on preparation of the field of operation, preparation of the operator, operating room, etc. These descriptions are in line with the conventional methods now universally used. To this there is no objection, but when we approach the chapters descriptive of the operations we miss the air of broad surgical principles that should breathe through such pages, and find ourselves confined to the mechanical details of work done by the author's two-branched or four-branched dilators, the author's dull or sharp curette, the author's double-cutting-edge trachelorrhaphy knives, etc., etc. This is too narrow, too mechanical. No special knife is necessary for the performance of trachelorrhaphy, if the operator understands the principle of the operation and the essentials to success. The same remark applies to all the gynecological procedures. Special instruments, of course, are necessary, but slight modifications of established instruments for the purpose of meeting an individual operator's fancy and enable him to attach his name thereto are not of sufficient importance upon which to base an operative manual. Such is the fundamental weakness of the book under discussion. In addition to this there are numerous minor errors of technique and not a few major points open to criticism.

In the chapter on the care of patients after operation the author shows that he is a good nurse, resourceful and attentive. Definiteness of statement and fulness of detail must be the saving features of a book upon this subject, but the statements must be accurate and the details justified by experience.

CLINICAL PATHOLOGY OF THE BLOOD. A Treatise on the General Principles and Special Applications of Hematology. By JAMES EWING, A.M., M.D., Professor of Pathology in Cornell University Medical College, New York. Lea Brothers & Co., New York and Philadelphia.

THE enthusiasm with which the study of the blood has been taken up by clinicians, as well as laboratory workers, has been more than justified in the gaining of an immense amount of practical information. In order to keep pace with the rapidly accumulating facts which have practical, as well as theoretical, importance a number of excellent manuals have appeared in English and in foreign tongues. We confidently believe that the volume under consideration merits high praise and is to be considered the latest and best word on the general subject.

The study of hematology is bound to be one of the most important aids in medical diagnosis. Without it, in many cases, the practitioner stumbles along, without any idea of the fundamental trouble in many an involved and complicated condition. We know of no more practical and reliable guide than the present work. It is complete, exhaustive, accurate, and exhibits good judgment in the interpretation of the many studies made by numerous investigators.

The work is further commendable from the illustrative standpoint and for bibliographic completeness. The "up-to-date" man belies such characterization who does not take advantage of the important facts which are here collected and arranged for him.

EXPERIMENTAL PSYCHOLOGY. A Manual of Laboratory Practice. By EDWARD BRADFORD TITCHENER. Vol. I. Qualitative Experiments; Parts I.-II. Students' and Instructors' Manual. The Macmillan Company, New York.

THE present work typifies that tendency of modern psychology to get as far away from speculative interpretations of Nature's processes as possible. It is eminently a work dealing with experimental methods and, as such, one of the best in the English language.

The author has avoided, and we believe very wisely, the usual text-book style of definitions of psychological phenomena and has substituted a carefully arranged schedule of experiments, mostly with self-made apparatus, which affords the student, in the carrying out, the best type of observations concerning the essential features of the psychical processes involved.

We commend this manual most cordially to student and to teacher alike. To the neurologist and alienist the experiments in sense perceptions would prove suggestive and valuable.

A LABORATORY GUIDE IN ELEMENTARY BACTERIOLOGY. By WILLIAM DODGE FROST. Instructor in Bacteriology, University of Wisconsin. Published by the Author. Madison, Wisconsin.

THIS work consists of a book of laboratory sheets specially prepared and graded for the student of bacteriology. It constitutes note-book and text-book in one binding and as such is to be recommended. It deserves a wide use, as it is thorough, systematic and very carefully planned and worked out.

ESSENTIALS OF THE DISEASES OF CHILDREN. By WILLIAM M. POWELL, M.D. Third Edition, Thoroughly Revised by ALFRED HAND, JR., A.B., M.D., Dispensary Physician and Pathologist to the Children's Hospital, Philadelphia; Bacteriologist, the Bryn Mawr Hospital; Pathologist to St. Joseph's Hospital. Philadelphia and London, W. B. Saunders and Company.

We are inclined to condemn the use of quiz-compends as leading students to study facts parrot-fashion with neglect of more complete works on the subject, yet in certain schools the compend is a popular book, and, if it must needs be, we cannot help feeling grateful if it is carefully compiled by competent men from the best works. In the past few years the advances in pediatrics and infant-feeding have been rapid and extensive, and this new matter has not been forgotten in this revision. Numerous excellent prescriptions have been included, the metric system, however, being completely ignored. Splenic anemia is not mentioned, and in modifying milk for artificial feeding, cow's milk is assumed to contain 3.5 per cent. of fat, a low percentage.

BOOKS RECEIVED.

The MEDICAL NEWS acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the MEDICAL NEWS will shortly appear.

ANÆSTHETICS AND THEIR ADMINISTRATION. A Text-Book for Medical and Dental Practitioners. By Dr. F. W. Hewitt. 8vo, 527 pages. Illustrated. The Macmillan Company, New York.

HOW TO COOK FOR THE SICK AND CONVALESCENT. Arranged for the Physician, Trained Nurse and Home Use. By Helena V. Sachse. 12mo., 239 pages. Illustrated. J. B. Lippincott Company, Philadelphia.

THE HYGIENE OF TRANSMISSIBLE DISEASES: THEIR CAUSATION, MODES OF DISSEMINATION AND METHODS OF PREVENTION. By Dr. A. C. Abbott. 8vo, 351 pages. Illustrated. W. B. Saunders & Company, Philadelphia and London.

PROCEEDINGS OF THE NINTH ANNUAL MEETING OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES. 8vo, 507 pages. R. R. Donnelley & Sons' Co. Chicago.

DIE SERUM BAKTERIENTOXIN UND ORGAN-PREPARATE. By Dr. Max v. Waldheim. Demi 8vo, 404 pages. V. Hartleben, Wien, Pest, Leipzig.

PRACTICAL SURGERY. For the General Practitioner. By Dr. Nicholas Senn. 8vo, 1,133 pages. Illustrated. W. B. Saunders & Company, Philadelphia and London.

ESSENTIALS OF THE DISEASES OF THE EYE. By Dr. E. Jackson. 12mo., 261 pages. Illustrated. W. B. Saunders & Co., Philadelphia and London.

REPORT OF BOARD OF HEALTH AND BOARD OF CHARITIES OF PORTO RICO. 8vo, Washington.